AMERICAN CINEMATOGRAPHER

FOR AMATEUR AND PROFESSIONAL PHOTOGRAPHERS

March, 1940

25c

Foreign 35c
Published in Hollywood by
American Society of
Cinematographers

Toland and Haller Award Winners

February Films
BLAISDELL

Faster Lenses at Paramount
STULL

Sequences Big in Travelogs
HERBERT

India Handicapped
BERKO

Making Stand Up Titles
SHERLOCK

Polishing a Feature
SPRUNGMAN

Studying Meters
NORWOOD

Philly Has Rare Dinner
LEVENE

Projectionists Conduct Contest
CRAMER

Making of Gadgets
TEOREY

Securing Light Outdoors
CADARETTE

Scene in M G M's "Northwest Passage"

1920 — 1940

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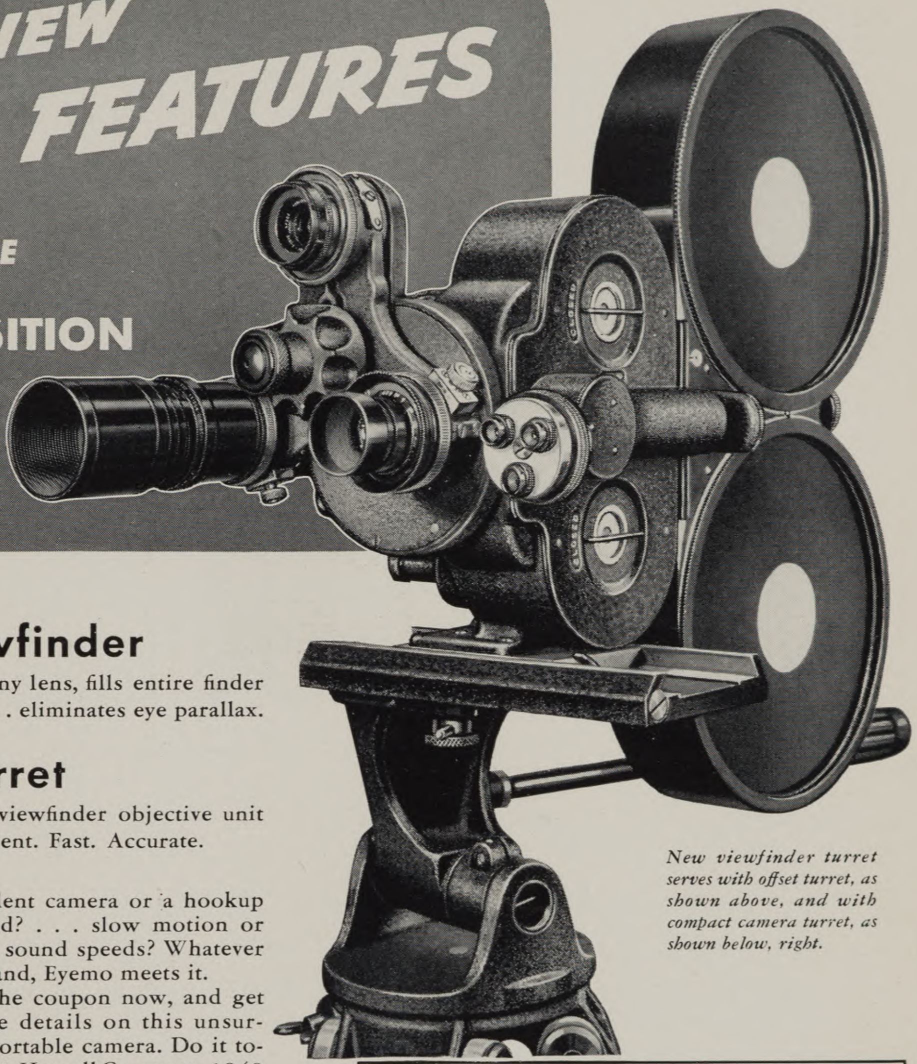

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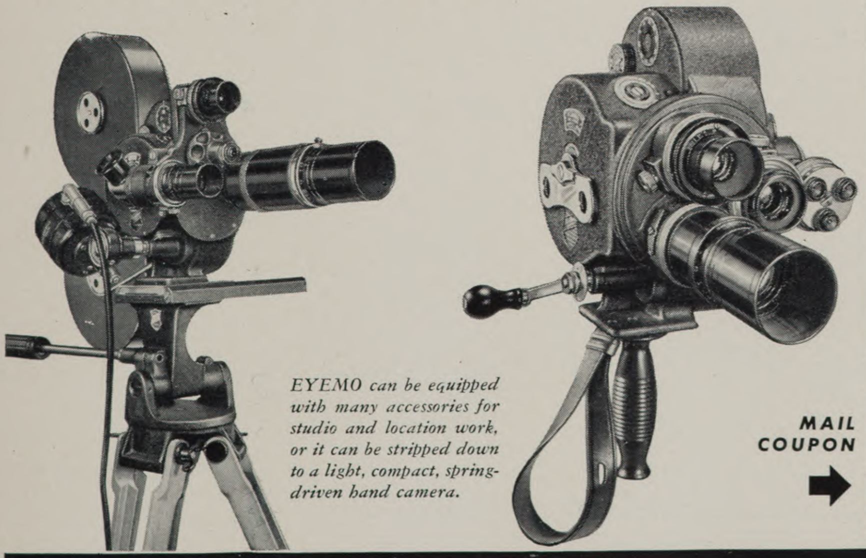

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AMERICAN CINEMATOGRAPHER

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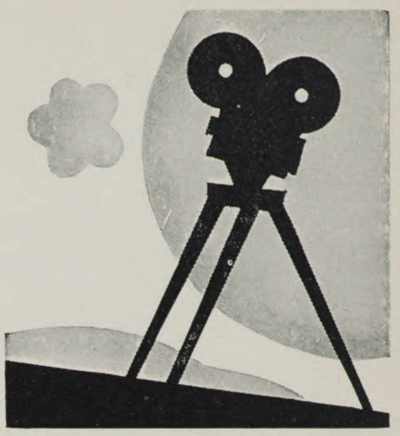

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Front Cover

ON the front cover is a scene of the camera crew of "Northwest Passage," M-G-M's stirring picture. The location is near Payette Lake, Idaho. In the foreground is Robert Young, chief supporting player to Spencer Tracy. In front of the camera, with old-style megaphone and hand megaphone of public address system, is Director King Vidor. Behind the director is Paul Hill, Technicolor technician. At the director's right, in pith helmet and his hand on the camera, is Assistant Director Red Golden. Behind him, meditating a script, is Jack Smith, A.S.C., process department.

Behind the camera, wearing dark glasses and felt hat, is William Skall, A.S.C. Also behind the camera, quite out of sight, is Sidney Wagner, A.S.C., director of photography. The assistant cameraman, Bob Bassette, is at the extreme left of the picture.

"Northwest Passage" is reviewed on Page 138 in this issue.

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Five Agfa Films you should know...

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TOLAND AND HALLER

Gregg Toland, A. S. C., winner "black-and-white" camera award.

GREGG TOLAND, A.S.C., wins the Academy award for the finest photography in the 1939 black-and-white division. The medium was Samuel Goldwyn's "Wuthering Heights."

The award for color was to Ernest Haller, A.S.C., Ray Reunahan. A.S.C., and M. Wilfrid Cline, A.S.C., for their work on "Gone with the Wind," Selznick International.

The runner-up for the black and white division, or the second named for final decision, was Bert Glennon, A.S.C., with the picture released last February by Walter Wanger, new president of the Academy, "Stagecoach."

On the color division the second choice was Sol Polito, A.S.C., and W. Howard Greene, A.S.C., with Warner Brothers' "The Private Lives of Elizabeth and Essex."

In the department of special effects Fred Sersen and E. H. Hansen of Twentieth Century-Fox won an award on "The Rains Came."

For sound recording honors went to Bernard B. Brown for Universal's "When Tomorrow Comes."

Darryl F. Zanuck, chairman of the research Council of the Academy of Motion Picture Arts and Sciences, announced the granting of eight honorable mention awards for scientific or technical achievement, given by the Research Council with the approval of the Academy Awards Committee to the following:

To George Anderson of Warner Brothers Studios for an improved positive head for sun arcs.

The positive head for sun arcs is an improved, simplified equipment or holding and feeding the positive carbon in an arc lamp. This mechanism contributes to the advancement of motion picture lighting technique by producing a steadier and quieter light.

To John Arnold of the Metro-Goldwyn-Mayer Studio for the M-G-M Mobile Camera Crane.

This new camera crane, because of its unique flexibility, permits the camera to be maneuvered rapidly, easily and silently, thereby supplanting the conventional type camera mounting. This equipment includes a number of novel features and is an important contribution to motion picture production.

Ernie Haller, A. S. C., director of photography, color award winner.

To Thomas T. Moulton, Fred Albin and the sound department of the Samuel Goldwyn Studios for the origination and for the application of the Delta db Test to sound recording in motion pictures.

The Delta db Test is an effective dynamic method of determining best possible processing of variable density sound tracks. Since accurate processing is vital to sound quality this test is an important contribution to recording.

To Emery Huse and Ralph B. Atkinsoon of the Eastman Kodak Company for their specifications for chemical analysis of photographic developers and fixing baths.

These specifications gave to the motion picture industry the first complete, rapid and practical method for analyzing photographic developing and fixing solutions. The importance and practicability of the specifications has been evidenced by the fact that they have now been generally adopted throughout the industry.

To Farciot Edouart, Joseph E. Robbins, William Rudolph and Paramount Pictures, Inc., for the design and construction of a quiet portable treadmill.

This treadmill, because of its portability and quiet operation, may be used in a wide variety of scenes and at a wide variety of speeds, with a minimum of restriction to recording, and is therefore a noteworthy contribution to motion picture production.

To Harold Nye of Warner Brothers Studios, for a miniature incandescent spot lamp.

The miniature incandescent spot lamp is a small, powerful source of light which may be concealed in the set or mounted on the camera matte box without upsetting camera balance, and is therefore an important contribution to cinematography.

To A. J. Tondreau of Warner Brothers Studios for the design and manufacture of an improved sound track printer.

Ray Reunahan, A. S. C., associate of Haller.

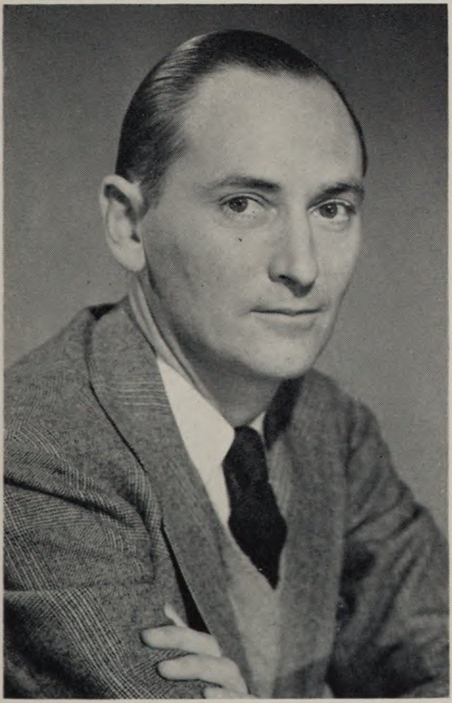
WIN CAMERA AWARD

This printer incorporates features which have not previously been utilized in the printing of recorded sound track, affording greater accuracy of track placement, better definition and improved quality. The development of this sound track printed is an important contribution to the progress of the industry.

For important contributions in the cooperative development of new improved process projection equipment:

To F. R. Abbott, Haller Belt, Alan Cook and the Bausch & Lomb Optical Company for faster projection lenses; The Mitchell Camera Company, for a new type Process Projection Head; Mole-Richardson Company, for a New type automatically controlled projection arc lamp; Chadles Handley, David Joy and the National Carbon Company for improved and more stable high-intensity carbons; Winton Hoch and the Technicolor Motion Picture Corporation for an auxiliary optical system; Don Musgrave and Selznick International Pictures, Inc., for pioneering in the use of the coordinated equipment in the production "Gone with the Wind."

This cooperative development improves the already invaluable process projection method, which in the past has been largely limited by insufficient light intensity and screen size. This development is a definite step toward overcoming past deficiencies. The resulting improvement in quality permits wider use and increased flexibility, thus greatly expanding the scope and possibilities of process projection.



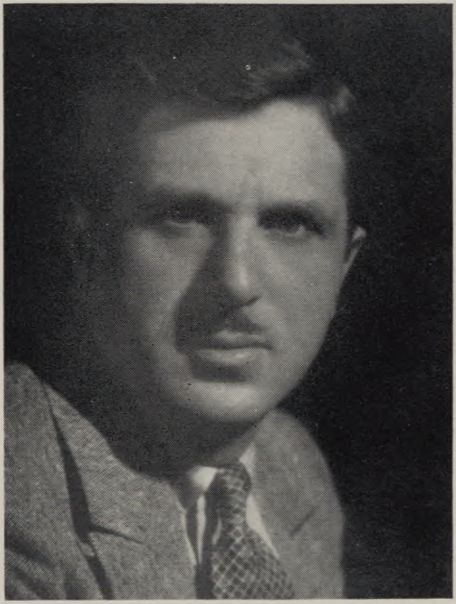
M. Wilfrid Cline, A. S. C., associate of Haller.

By their individual contributions to the complete equipment, each of the above cited has furthered the progress of the industry.

In announcing these awards, the report of the Research Council emphasized the careful review of all scientific or technical progress in the industry during the year, for the purpose of determining those achievements considered worthy of awards recognition.

Honorable Mention

The report further stated that those accomplishments "which have basic influence upon the industry are given recognition for outstanding achievement in the form of a major award, symbolized by an Academy Statuette.



Sol Polito, A. S. C., runner-up on color award.

Those accomplishments which are of importance to the progress of the industry but merit recognition to a lesser degree than a major Award are recognized by honorable mention in the annual Scientific or Technical Awards Bulletin.

"A major award for scientific or technical achievement is not necessarily granted each year," continues the report, "but is only awarded for those achievements of great outstanding value to the industry. The major award for scientific or technical achievement is based upon such rigid requirements that it is considered of the highest importance, and is the most highly prized technical recognition throughout the industry.

W. Howard Greene, A. S. C., associate of Polito.

"The requirements for this award are so rigid that only five such awards have been made since the inception of the Annual Academy Awards.

"The motion picture industry has drawn freely upon practically all the arts and sciences known to man, and the present motion picture represents the coordinated use of developments from an unbelievably large number of scientific and technical fields.

"Were it not for the creative ability of motion picture technicians to use the developments in the fields of acoustics, optics, chemistry, electronics, mechanics and physics, motion pictures would still be in scripts and not on the screen.

"Governed by the policy of recognition for only those achievements which are of outstanding merit and which promise to have a lasting influence on the industry, the Research Council this year considered thirty-five nominations for scientific or technical awards. While the industry has noted steady progress during the year, no achievement, in the opinion of the Research Council, was of sufficient merit to receive a major award."

The developments granted certificates of honorable mention were judged worthy of recognition by the Council and by committees appointed to assist in the review of the nominations.

Academy Grows

Membership of the council, in addition to Chairman Zanuck, consists of John Aalberg, Bernard B. Brown, Farciot Edouart, E. H. Hansen, Nathan Levinson, John Livadary, Thomas T. Moulton, Douglas Shearer, and Gordon S. Mitchell, manager.

The Academy is outgrowing Los Angeles. The City of Angels has no hotel, apparently, with capacity to accommodate the annual awards dinner in a manner worthy of its importance. The crowded condition of the Cocoanut Grove attested that fact. The dinner, which was held on Thursday, February 29, again proved the usefulness of the Academy, its importance to the industry as a whole and its incentive value to the entire personnel of the studios.

Frank Capra, retiring Academy president, opened the programme by introducing Walter Wanger, the new president. The former officer pleaded for the freedom of the Academy and the industry from racketeers and all parasites who attempt to fasten on to the industry.

Mr. Wanger spoke briefly on the aims and program of the Academy. In turn he introduced Darryl Zanuck, who presented his report as chairman of the Academy Research Council, together with the various awards as already recorded.

Mr. Zanuck introduced Gene Buck, president of ASCAP, who presented the musical awards. Following these came Bob Hope, who brought with him his usual bag of verbal tricks and quips, and was heartily welcomed by the house.

Bob introduced Mickey Rooney as the ten best American actors and Mickey made good on the build-up.

In a speech that was marked by tact, good judgment, poise and sincerity, Mickey presented Judy Garland, who had been awarded a miniature statuette trophy for her "outstanding performances as a screen juvenile during the past year."

"Swell Speech"

Bob Hope, when he returned to the rostrum, remarked amid applause: "That was a swell speech of Mickey's."

Other speakers were Mervyn Leroy, chairman of Awards Program Committee, who announced the award for best direction, Victor Fleming, absent on account of illness.

Sinclair Lewis presented the writing awards for best original story to Lewis R. Foster for "Mr. Smith Goes to Washington," and that for screen play was awarded the family of the late Sidney Howard for "Gone with the Wind."

D. Ernest Martin Hopkins, president of Dartmouth College, presented the Irving G. Thalberg Memorial Award, to David O. Selznick.

There was more than a bit of drama introduced when Fay Bainter, winner last year of the award for best supporting actress, referred to the traditions of the Academy in choosing its favorite regardless of race or creed and presented as the winner of that award this year Hattie McDaniel, a negress, for her work in "Gone with the Wind." Miss McDaniel responded feelingly and was warmly applauded.

Other awards were as follows:

Production—"Gone with the Wind," Selznick International.

Actor—Robert Donat for "Goodbye, Mr. Chips," Metro-Goldwyn-Mayer (England).

Actress—Vivien Leigh for "Gone with the Wind," Selznick International.

Supporting Actor—Thomas Mitchell for "Stagecoach," Walter Wanger.

Direction—"Gone with the Wind," Selznick International, Victor Fleming.

Art Direction—"Gone with the Wind," Selznick International, Lyle Wheeler.

Film Editing—"Gone with the Wind," Selznick International; Hal C. Kern and James E. Newcom.

Music: Best Original Score—"The Wizard of Oz," Metro-Goldwyn-Mayer, Herbert Stothart. Best Scoring—"Stagecoach," Walter Wanger; Richard Hageman, Frank Harling, John Leipold and Leo Shuken. Best Song—"Over the Rainbow," from "The Wizard of Oz," Metro-Goldwyn-Mayer, E. Y. Harburg and Harold Arlen.

Bert Glennon, A. S. C., runner-up on black-and-white award.

Short subjects:

One-reel—"Busy Little Bears," Paramount.

Two-reel—"Sons of Liberty," Warner Brothers.

Cartoon—"The Ugly Duckling," Walt Disney.

Bausch and Lomb Increase Lens Light Transmission

The first commercial application of a special film coating to increase the light transmission of lenses has just been completed with the delivery of new projection lenses to twenty-five Loew theatres in the larger cities. Lester B. Isaac, director of projection and sound for Loew's Theatres, ordered the new lenses for the first showing of "Gone with the Wind," after exhaustive tests by Bausch & Lomb had disclosed that screen illumination could be stepped up from 15 to 40 per cent depending upon the type and focal length of the lens used.

Marked improvement in image contrast and sharpness of focus has been reported by Rochester projectionists, who have been testing the new lenses.

Revere Adds to Its 8mm. Equipment Model Double 8

The Revere Camera Company, Chicago, manufacturer of 8mm. motion picture equipment, announces a new addition to its line—the Revere Model 88, Double 8 Camera. This model takes all double 8mm. film, either color or black and white.

An exclusive feature of the new camera is a new single sprocket control which prevents film jamming. Should the user forget to form a loop in the film in loading the camera, this sprocket control automatically forms the loop for him.

Other advanced features of the Revere Double 8 Camera are: Capacity, all standard double 8 spools, licensed under Eastman spool and spindle patents, five speeds, 8, 12, 16, 24, 32 frames per second, rotary disc shutter 1/35th second speed at 16 frames, spring motor drive with uniform run of 5 feet.

All gears are cut for silent operation; built-in optical view-finder, parallax corrected; with Wollensak f.3.5 fixed focus lens, price $29.50. Other lenses available, f.2.7, f.1.9, one and one-half inch telephoto f.3.5.

The new Double 8 Camera supplements the Revere Single 8 Camera, which takes ultra-fast fine-grained Revere film (made for Revere by Agfa), costing only $1.35 per 30 foot spool, including processing.

For further details address Revere Camera Company, 320 East 21st Street, Chicago.

Bell and Howell Tells Why Diagonal Juncture Is Made

Bell & Howell steadfastly adheres to the diagonal juncture, which is said to be exclusive to Filmo splicing equipment.

"It is not an accident, nor just to be different, that Filmo splicers weld the film diagonally," declares a company statement. "Away back at the beginning B&H engineers set out to find the most satisfactory way of fastening one piece of film to another. After much experimenting, during which the straight splice, too, was thoroughly tested and tried, the diagonal type was decided upon for laboratory-proved reasons."

One of these is the diagonal splice is longer than the straight splice, and since the bonding area is therefore greater, the diagonal juncture is stronger.

There is less tension on the diagonal splice as the film moves through the loop formations than on the straight splice is another.

The February Films

By George Blaisdell

SOMETIMES it is better for future comfort not to make too great a picture — such, for instance, as "Snow White." Had the Disney stories been created in reverse order, "Pinocchio" first and "Snow White" last, undoubtedly there would have been heralded two great pictures. As it is, the memory of "Snow White" is too recent, too fresh in the mind, to allot to "Pinocchio" a fair measure of its just deserts.

Possibly a major reason for the feeling, if it is true it exists, is that we do not have recorded the impressions of the little folks, who on ballot undoubtedly would give to "Pinocchio" the weight of their votes. It is more of a juvenile picture. "Snow White" was for all ages.

The story is crowded with mystifying ways and means of achieving results on the screen—serious and comic. Photographically it is one marvel after another.

Time will tell which is the greater of the two great pictures, and it is only time that can tell. But "Snow White" did travel a long distance.

Audiences will notice a far greater dimensional illusion in "Pinocchio" than was seen in "Snow White," suggests the official program of the preview. Two factors are largely responsible for this. One is a new painting process developed and perfected within the Disney studio paint laboratories. This process gives a moulded, rounded appearance to the faces and bodies of the characters; the highlights and subtle changes on skin and costumes.

Also, improvements in the studio's multiplane camera technique made it possible to obtain more exciting effects in the photographing of "Pinocchio." The new type of multiplane camera used on the production is capable of photographing twice as large a field as the original crane used in connection with "Snow White," and can bring many more levels into focus at one time than originally designed.

●

Perhaps no book in many a month has gone into the motion picture mill amid greater controversy than did "Grapes of Wrath." The controversy was many-sided. If it were not the foulness of the language indulged in it was the question of fact. Californians of the state's mid-section were up in arms, declaring the book badly overdrawn, untrue, and all that. Maybe it was—in some instances. And maybe it wasn't.

Anyway, Darryl Zanuck of the Twentieth Century-Fox company bought the book and turned Director John Ford loose on it. Ford is an old-timer who has a way with him in handling these tough babies. He gets out of them the meat, the essentials, the things that stir men and women.

And so he has done with "Grapes of Wrath." Right off the bat he picked Gregg Toland, A.S.C., to take care of the photographing for him. "Grapes" was in black and white; and so, perhaps, it should have been.

It was a painful story. It was not a story of happiness, of light, of laughter; it was a story of unhappiness, of dark hours, and disappointment. It was a story of low light, reflecting the human hopes that had sunk to the depths. And so Gregg Toland lighted his picture. His lighting did fit the mood—to a t.

The picture was shown in a stillness almost deathly—indicating beyond a doubt that those who were looking on it were gazing on a battle of life and death. It is a film to be seen by every one who likes a good story, whether it is on his side or not. It is not a picture to be seen today and tomorrow to be gone—one of a hundred. It is one that will remain in the memory.

Up in front are Henry Fonda, Jane Darwell, John Carradine, Charley Grapewin and Russell Simpson. It's a long cast and a good one.

It is a picture which not alone professional photographers will study with deep interest. Amateur cinemakers also will follow it with closest attention, although it is not likely they will try to emulate the cinematographer by using so small an amount of light. For that closeness to zero is where the skill begins.

●

"Swiss Family Robinson" is a story that is old. It is old as well to those now old men and women who once were eager boys and girls. The story has been made for the screen by a new combination of producers, by men who have for a long time written screen stories and now are presenting their first picture. It is a good picture. It is good because it is based on a good story, and that means ability to write a good story should also guarantee a good picture. The producers are Gene Towne and Graham Baker.

The story has a timeliness and its

MILLER AND RENNAHAN WIN REPORTER AWARD

THE studio press correspondents voting through the Hollywood Reporter have awarded the photographic honors for January to Arthur Miller, A.S.C., and Ray Rennahan, A.S.C. The picture was "The Blue Bird" of Twentieth Century-Fox.

It may be recalled that this magazine in its February issue in speaking of that picture declared "For sheer beauty in picturemaking 'The Blue Bird' perhaps tops anything that has preceded it. . . . Above all else, it is a photographer's picture—a technician's picture, if you will. Lights and lenses tell the story. . . ."

In the same issue Dan Clark, A.S.C., supervisor of photography at the Twentieth Studio, declared, in speaking of "The Blue Bird": "Many believe it was a great deal of a trick job. They are in error. It was a lighting problem all the time."

In its February issue this magazine touched upon three pictures, one of the two others being "Abe Lincoln in Illinois." Mention was made of the manner in which the photography of James Wong Howe, A.S.C., stood out. It is interesting to note the correspondents' poll thought likewise, for it voted that subject in the third place.

The second spot went to Gregg Toland, A.S.C., for his work on "The Grapes of Wrath." What The Cinematographer was moved to say of the remarkable work photographically on that black and white subject already is in type, for appearance in the March issue.

Coming back to "The Blue Bird" the award of the correspondents was the second they have handed to Artie Miller, his previous one being for Twentieth Century-Fox's "The Rains Came." That picture was previewed four months earlier.

To Ray Rennahan comes the distinction of being mentioned four times now by the poll, the only one above Bert Glennon, A.S.C., who has three. Rennahan's was with Ernest Palmer, A.S.C., on "Kentucky"; with Bert Glennon on "Drums Along the Mohawk"; with Ernest Haller, A.S.C., and Wilfrid M. Cline, A.S.C., on "Gone with the Wind," and the present one.

theme is presented to the audience in the first few minutes of running. The period is of the Napoleonic wars. The father of four sons is concerned as to the upbringing of the boys. He wants them to be raised away from the atmosphere of the men who kill. He wants to get away to the colonies, where there is peace. They set sail, and in the south seas are shipwrecked. The family alone survives. They thrive in spite of mishaps.

The director of photography is Nicholas Musuraca, A.S.C., and the special effects are by Vernon L. Walker, A.S.C. There is much of the picture that falls in the special effects class. It will particularly appeal to the amateurs, who will marvel at the manner in which some of the hazardous effects are secured. Nevertheless the evenness of the photography is so marked it is unlikely few other than the professionals will be able to draw the line between the two departments.

Thomas Mitchell is the father of the family and Edna Best the mother. It is a great team. Perhaps neither of them has had the opportunity before this for a part of its like. Freddy Bartholomew, Terry Kilburn, Tim Holt and Baby Bobby Quillan are the sons of the family. Christian Rub has a comparatively brief part. Those who also see "Pinocchio" are invited to note the similarity between Thoren, as he is billed in "Swiss Family," and the animated Gepetto, the father of Pinocchio —and especially the sound of his voice. They are pretty nearly like two peas in a pod.

"Swiss Family Robinson" is a picture that moves—a splendid family picture.

●

In its compounding of "Young Tom Edison" MGM Studio has done a splendid job. It is a picture for the family, for all of the family. Mickey Rooney in his inimitable fashion portrayed the sixteen-year-old boy, always in the doghouse with his father and his neighbors, yet always understood and appreciated and admired by his mother and younger sister. The lad's urge to learn, to know, was the cause of his misfortunes even as it was the foundation of his later greatness.

It was an unusual cast surrounding Rooney. There was Fay Bainter as the mother—and where could a better one have been found! George Bancroft was the stern and uncompromising father, anxious to discover something worthwhile in this son of his but off stage resorting to the strap. Virginia Weidler was the sister who adored her big brother, and Eugene Pallette was the conductor of the train on which young Edison was a "butcher."

The high spot of the picture, the highest among several, was young Edison's saving of a crowded train from being wrecked. A bridge was out, wires were down, and there was no way of getting word through to the crew. Young Edison's sister, who with him shared knowledge of the telegraph code, was on the train. The lad conceived the idea of telegraphing the news by means of a spare engine's whistle, the news being identified by his sister, and the train being stopped. The incident abounded with thrills. Also the incident had foundation in fact, and it was new in pictures.

For the second day in succession MGM released in preview a picture that had come from the hand of Sidney Wagner, A.S.C. The one that preceded "Young Tom Edison" was "Northwest Passage," photographed the year before. The first was the period of 1759, the second around 1860. Mr. Wagner has been much of a traveler in recent years. It was he who photographed the splendid African scenes of "Stanley and Livingstone," exposing nearly 100,000 feet of negative in a four or five months' trip from Nairobi to Lake Tanganyika. That was the period of the 1870s. Wagner has been pretty much around this old world with his camera.

The Edison picture renewed to memory of the present writer an occasion in the Ritz-Carlton Hotel in New York on the occasion of the seventy-seventh birthday of Edison. It was a luncheon given the inventor by the motion picture industry. That, by the way, was around February 11, 1924. The writer represented a New York motion picture trade paper.

It was about 12:40 when the party was seated. Present not only were notables of the picture industry, but also men prominent in world affairs. Recollection is keen of Adolph S. Ochs, the great publisher of the New York Times. It was nearly 5 o'clock that afternoon when the diners arose from their seats.

There had been much talk. There was a goodly list of speakers at the big guests' table in the centre of which was the guest of honor. Practically everybody who was supposed to make a record of what went on was too interested to put pencil to paper. The present writer was an addict to the shorthand drudge in those days, and in spite of the great temptation to forget it had made some notes.

The next day a story of a couple of thousand words was written, with a carbon copy. That story was forwarded to Mr. Edison's secretary in Orange, with a note asking him if Mr. Edison would be interested in glancing at it. Also a request was made that Mr. Edison inclose a photograph for reproduction. In a few days an answer was returned, saying that not only had Mr. Edison been deeply interested in what the story contained but that it was the first intimate knowledge he had received of what had taken place that day. That told the story of the entire absence of hearing with which he had been afflicted, a condition not too entirely understood by the public.

Mr. Edison also inclosed a photograph. At the writer's home a brief search for it uncovered what sixteen years and three thousand miles had failed to lose. It is reprinted herewith.

●

It is seldom indeed a picture travels its entire length within the walls of a hospital. When it does do that the average man will wager plenty it will not prove a success, that it will not grip the house, all the way through. And the average man will be wrong.

For Carole Lombard and her fellow-players in RKO-Radio's "Vigil in the Night" succeed in doing exactly that. It is a serious picture, leavened by a minimum of mirth. Those who share with Miss Lombard in the making of this heavily dramatic subject are Brian Ahearne and Ann Shirley, supported by among others Julien Mitchell, Robert Coote, Brenda Forbes and Peter Cushing. The picture is produced and directed by George Stevens.

Robert De Grasse, A.S.C., directed the photography, which was even, unspectacular, eminently satisfactory. There's an abundance of closeups of children in their hospital surroundings, appealing to the eye—and to the heart. "Vigil in the Night" is a good picture, and for a mature house better than that.

●

Universal's first showing of "My Little Chickadee," featuring Mae West and W. C. Fields, was really an interesting event. The combination of two such genuinely unique players in one program and under one head was sufficient to arouse curiosity of more than passing depth in any group of veteran picture-goers. Each player was expected to draw upon all her or his experience of years upon the stage in order to provide the best in the way of verbal mirth. Each did, and the result at times was hilarious.

Nor yet was all of the mirth of the verbal order. There was that memorable instance, for example, when Mae, the unkissed bride of Fields, inveigles the latter to take a bath in her chamber. Straightway she lures a monster goat into the aforesaid chamber, tucks Nanny beneath the bedclothes, turns down the lights leaving just a faint mellow glow

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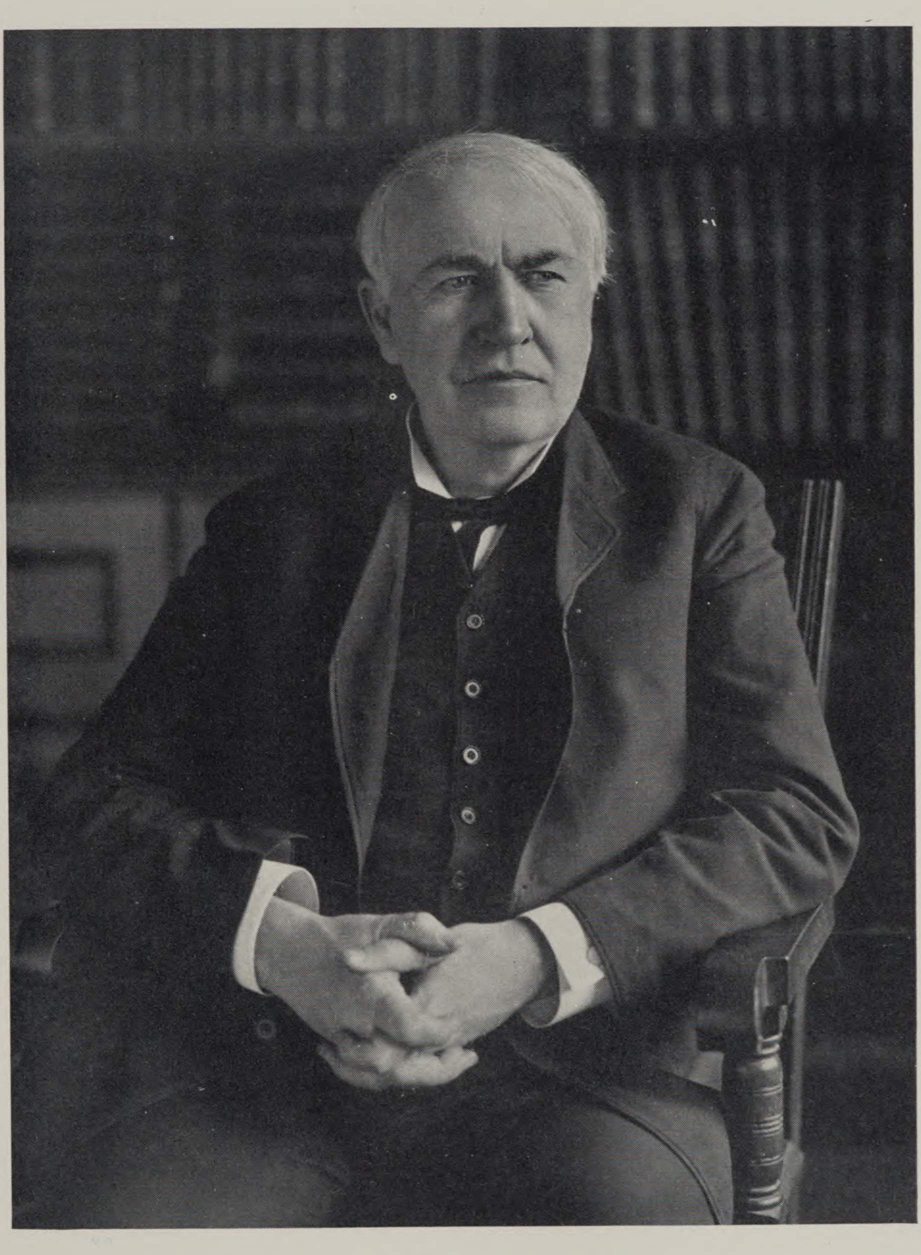
Gevaert Opens in Seattle

George M. Goffin, Pacific Coast manager of the Gevaert Company of America, Inc., is now in Seattle, Wash., opening a branch for the Gevaert Company. This branch will handle a full line of Gevaert sensitized photographic products and will be under the supervision of A. H. Graham as district manager. Mr. Graham formerly was a salesman with the Los Angeles office for a number of years.

The Seattle branch will be situated in the Textile Tower Building and will include in its territory Washington, Oregon, Idaho, Montana and the Territory of Alaska.



Thomas A. Edison, from photograph supplied in 1924 by Mr. Edison to George Blaisdell. The occasion had been a four-hour luncheon tendered to the great inventor on his seventy-seventh birthday by the motion picture industry.

Non-Glare Coating Makes Lenses One Stop Faster

By WILLIAM STULL, A.S.C.

FOR many years photographers have accepted the fact that a considerable proportion of the light that enters a lens never reaches the film. The greater part of this loss is occasioned by reflections from the various polished glass surfaces—inside and out—that make up the lens, and it increases with the increase in the complexity of the lens' design.

Thus the loss is considerably greater in many of the modern, complex high-speed lenses than in the simpler, older objectives. But since lenses depend for their action upon the use of many highly polished—and therefore reflective—glass surfaces, it has seemed that nothing could be done to avoid these losses.

Almost exactly a year ago, two Eastern research groups, working quite independently of each other, separately announced the development of methods of treating glass to eliminate surface reflections. That this created a sensation in photographic circles would be to put it mildly.

Here was a development so radically advantageous that it would practically revolutionize photography! But the excitement subsided when it was learned that in both cases the project was still in the experimental stage: that while lenses could be treated, the treatment was extremely delicate and not at all lasting.

Paramount Pioneers

Today the subject takes on renewed interest when it is learned that the treatment has been advanced to such a stage of commercial practicability that the Paramount Studio has been using a set of treated lenses on actual production, with such excellent results that treatment of all the studio's lenses is being contemplated.

The process used is that developed by Dr. John Strong of the California Institute of Technology. Essentially, this consists of depositing upon each of the glass surfaces treated an ultra-microscopically thin chemical film. This film measures but four millionths of an inch (0.000004 inches) in thickness—exactly one-quarter the length of a light-wave.

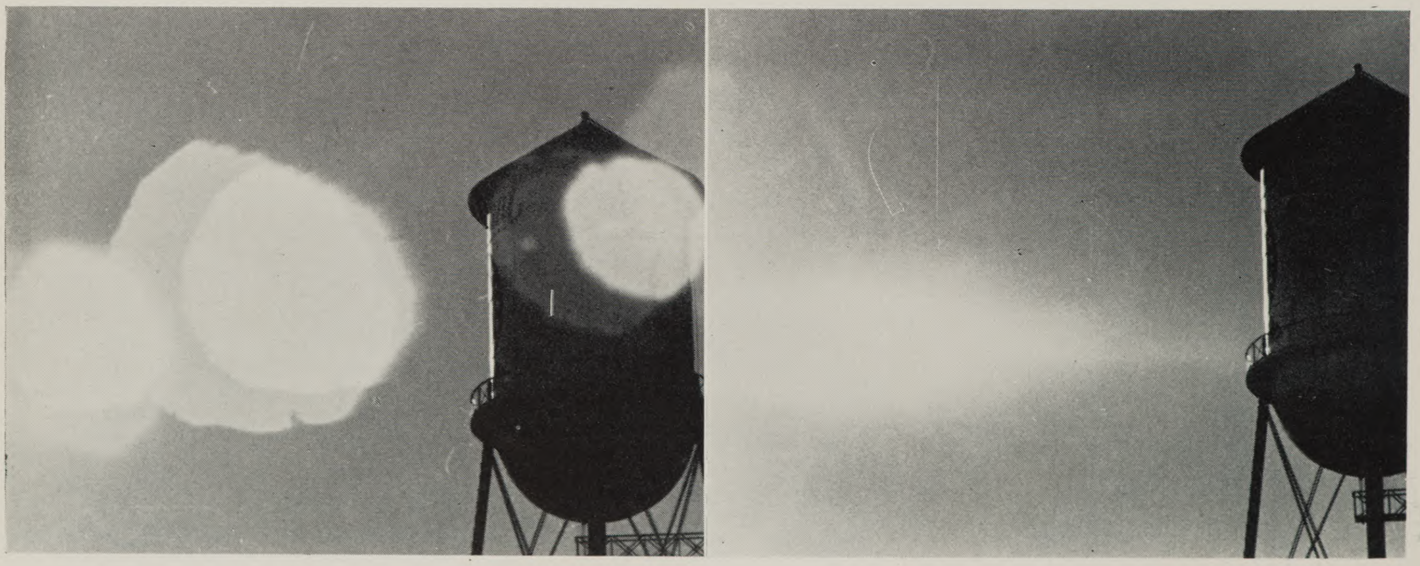
As light falls upon this film, rays are reflected from both its upper and lower surfaces. Since the coating is exactly one-quarter wave-length in thickness, these reflections from the upper and lower surfaces are equal in intensity, and opposite in phase. What follows is similar to the well-known interference effect in that these oppositely-phased reflections cancel each other out. However, classic scientific theory does not account for the fact that with this treatment there is an increase in overall light transmission which would occur if these reflections merely offset each other.

Some of the processes announced a year ago produced this coating by immersing the glass surface to be treated in a tank of liquid on the surface of which was an infinitely thin film (one molecule thick) of an insoluble soap.

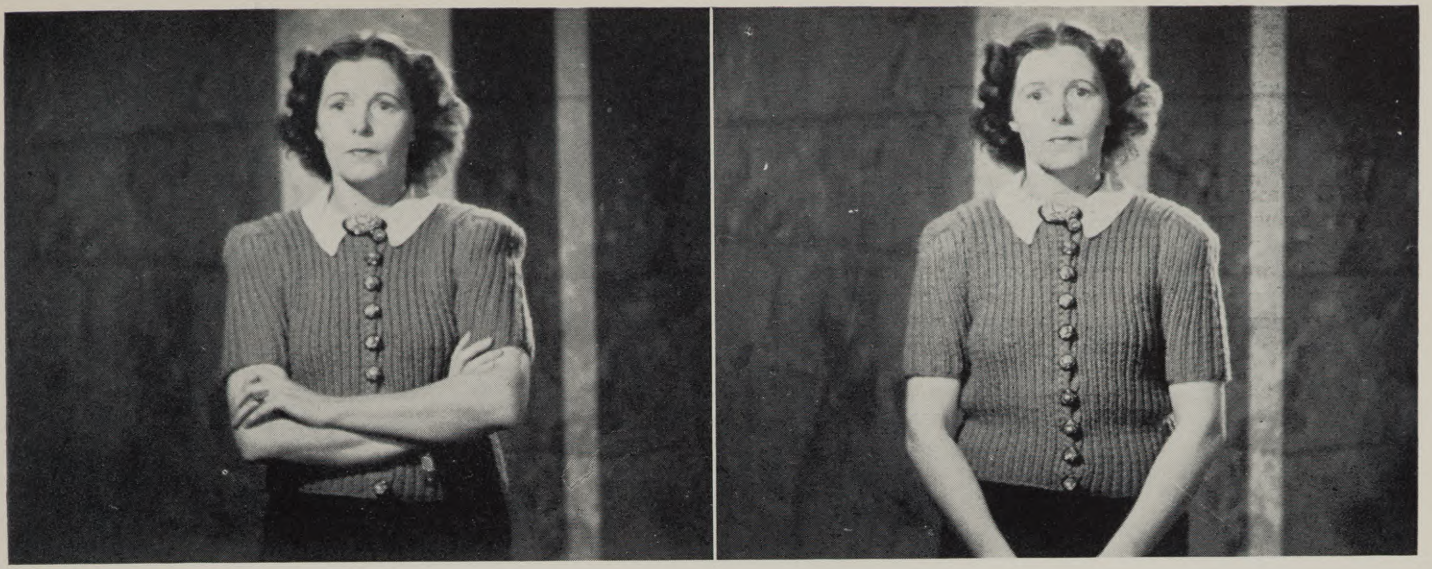
Forms Permanent Coating

Repeated immersions or dippings—approximately 22—built up the desired quarter-wave-length coating. It was still, however, a delicate, soapy film, with all the inevitable drawbacks of a soap-film.

Dr. Strong's method, however, is dif-



Left, frame enlargement from a test scene shooting directly into the sun with a standard (non-treated) lens. Note multiple reflections from glass surfaces of the lens. Right, comparative shot, but with camera panned even more directly into the sun, photographed through an identical lens to which non-reflection treatment has been applied. Note that flare is reduced almost entirely to simple photographic overexposure, and multiple reflections from lens surfaces entirely eliminated.



Left, frame enlargement from an interior test photographed through an untreated lens on DuPont Superior II. Lighting: three "dinky inkies" and one double-diffused "broad"; exposure, f.3. Right, comparative shot made under identical conditions with matched lens to which non-reflection treatment has been applied. Note increased definition and depth, also considerably increased shadow-detail (especially on back walls). A further difference in negative exposure values was compensated in making the enlargements from which Figs. 3 and 4 were reproduced.

ferent. In this, the desired surface-coating is deposited by evaporation in a vacuum. Instead of a soap-film the coating is a metallic fluoride. While the details of the Strong process cannot, of course, be given as yet, it may be stated that the present treatment produces a coating sufficiently durable to withstand any normal handling.

Some of the lenses used at Paramount have been washed to remove accidential fingerprints, without in the least disturbing the non-glare coating.

In addition, exhaustive tests by the optical experts of the studio's engineering staff indicate that the treatment is in no way harmful to the normal optical qualities of the lens. It is non-corrosive, non-tarnishing, and does not pit or scratch the glass surface. It is further stated that the expense of treating lenses is not prohibitive.

The practical advantages gained from using treated lenses are many. Probably the most startling is the increase in effective speed. Normally there is an average light-loss of 5.22 per cent from reflection for each air-to-glass surface inside or outside the lens: thus with a typical high-speed motion picture anastigmat like the Astro "Pan-Tachar," which has eight such glass-air surfaces, the loss of light from reflections is in excess of 41 per cent.

If such a lens is treated on all its external and internal glass-air surfaces, this loss is reduced to negligible proportions.

Increased Shadow Detail

But this accounts for only part of the actual gain in speed. Much of this reflected light finds its way back to the film as scattered, fog-producing light which tends to veil the shadowed areas. With this scattered light eliminated, it is possible with a given exposure to record a great deal of shadow-detail which is normally lost.

Conversely, it is possible to obtain a given effect, as measured by shadow detail, with considerably less light than would be needed to give the same effect with an untreated lens.

These two gains are cumulative, and add up to a practical increase in speed of virtually one full stop, or between five and six printer-light settings in the Paramount laboratory. Thus a normal f.2.3 lens, when treated is the equivalent in speed of an f.1.6 objective, but still retaining the depth of field, definition and optical quality of the f.2.3 design!

The elimination of the internal reflections gives a marked increase in the apparent definition of scenes photographed with treated lenses. The effect may be compared to that seen when using a fast lens with and without an adequate sunshade. The picture as a whole is visibly more crisp, and details not previously evident are suddenly revealed.

In the same way, depth of field is apparently considerably increased by the treated lens. It is quite possible that the circle of confusion is affected, since the resolving power is known to be increased.

Shooting Into Lights

Every photographer is familiar with the lens-flare which ordinarily results from shooting directly into strong sources of light, such as the sun or a studio lamp. The reflections from the several glass-air surfaces of the lens produce multiple, distorted images of the light-source or the iris diaphragm, usually with strong secondary halation streaks.

Comparative scenes filmed through treated lenses show an almost complete absence of these effects. Instead, a surprisingly clear image of the scene and the light source is obtained: such halation as is present is obviously photographic, rather than optical, and attributable to photographic overexposure and to reflections from the film base itself.

The practical advantages which this treatment offers to cinematography can be well imagined. The increased speed can be of tremendous value in simplifying lighting. The increases in depth and definition should be of almost equal benefit under modern conditions, especially in the case of "follow focus" and dolly shots.

It may be mentioned, too, that insofar as can be determined as yet, the use of treated lenses should be equally feasible in natural color cinematography, in Technicolor or any other process. While a treated lens, if examined in the hand, by reflected light, appears to have an iridescent magenta sheen, the coating does not appear to have the slightest effect upon the actual color-transmission of the lens, nor upon its color correction.

Other Uses

The visual image viewed on the focusing screen of a camera shows no trace of color alteration, and monochrome tests of standard color charts made under identical conditions with treated and untreated lenses show no difference in color rendition. It may therefore be assumed that the treated lenses may be used equally well in color photography; and due to the inherent limitations in speed and definition of all color processes, they could be used to even greater advantage in color than in monochrome.

Naturally, this non-glare treatment

(Continued on Page 142)

WHAT WORK WENT INTO "NORTHWEST PASSAGE"

GIVING something of an idea of the enormous work behind a great motion picture, MGM prints a story of 6000 words in its souvenir program describing how "Northwest Passage" was prepared and made. The company probably would be well repaid should it reprint this tale in pocket form and furnish it to exhibitors for distribution.

New York's MGM story department read the galley proofs of the Saturday Evening Post's serial "Rogers' Rangers" November 5, 1936, and recommended its purchase. On June 25 following the story was printed in book form, subsequently selling 500,000 copies. September 23 the tale was purchased by MGM. That was 1937.

Immediately following the story's purchase a location crew started a hunt. The original locale, Quebec Province, was found too well settled. The search shifted to the Pacific Northwest, with the same result. Then the ideal spot was discovered in Payette Lakes, Idaho.

March 29, 1938, Spencer Tracy was cast for Rogers.

June 7, 1938, a crew went forward, but six weeks later the location was abandoned on account of inclement weather. In May and June of last year a crew was sent to Idaho to rebuild exterior sets and prepare camp. On July 6, following the arrival of the entire cast, camera work was begun, and was continued in Idaho until August 19.

Indians to the number of 364 were brought from seven reservations of the Northwest. There was a Hollywood cast and crew of at least 250. There had to be housing space also for 500 extras as well as room for an entire studio in miniature.

Teletype with Hollywood

Showers, heaters and toilets were installed in forty log cabins and two frame dormitories. Huge circus tents were erected to house wardrobe, make-up and property departments. Other log and frame buildings were set up for electrical, camera and sound equipment. The former main lodge, now the commissary, was staffed by a Hollywood catering crew.

In a business office alongside the commissary a teletype, the first to be used on such a location, was installed to keep the troupe in instant communication with the production department at the studio, some 1350 miles away. Power for its operation, and for the lighting of the camp, was provided by a hydro-electric plant, also specially installed.

Three automobile-type boxcars brought from the studio costumes for 250 British soldiers, 240 Rangers, 200 French soldiers, 200 oarsmen and 400 Indians. Each of the 240 Rangers had three "stages" of uniforms: nearly new, partly torn, and in shreds, to represent different stages of the trek. And because of the rough usage which these uniforms received among pine branches, underbrush, etc., each Ranger had four changes for each stage, or twelve in all. Properties to an estimated value of $55,000 were scattered over the Idaho landscape.

To transport cast and crew to and from water locations a veritable navy was necessary. Four huge barges, one cabin launch and four open launches, one eighteen-passenger speedboat, one smaller speedboat, seventeen whaleboats and bateaux, two Indian war canoes, and every other rowboat which could be rented or commandeered carried men and equipment.

The most elaborate outdoor set was the Indian village of St. Francis, erected on the upper Payette River between towering granite cliffs. Comprising 125 separate buildings, it covered ten acres cut out of the virgin forest.

Planned Conflagration

Because the charred interiors of every building at St. Francis had to be visible after the Rangers had set fire to them it was necessary that every wall be finished from ground to roof. Forty thousand feet of copper tubing was laid underground and gasoline driven through it by two compressors, to be sprayed through tiny nozzles fastened behind doorframes and under windows.

From a seventy-foot tower built like an oil rig behind the village, field telephones instructed men in dugouts below what sections to fire and what to control. The Rangers tossed flaming torches on to roofs and against walls, but the gasoline was necessary to insure a rapid conflagration. The firing of the gas was done electrically from keyboards in the dugouts.

The final conflagration scene, which shows the Rangers crossing the river by canoe as the last flames rise behind them, required 800 gallons of gasoline and 1200 gallons of kerosene, poured directly on to the remaining charred framework, for by now the copper tubing had been melted. The entire C. C. C. McCall division stood by to prevent the fire spreading into timberland.

The only suggestion of accident occurred when a gust of wind blew flames across a camera parallel, causing Director King Vidor and Cameraman Sid Wagner, A.S.C., and their assistants to jump to safety, singed but not badly hurt.

In addition to Sid Wagner, the company's director of photography, William V. Skall, A.S.C., headed a Technicolor crew of sixteen. Exposed film was taken by camera truck to Boise each night, whence it was flown to Hollywood for processing. The prints were then flown back to location and shown in the improvised projection room.

The complete shooting time was seventy days, of which Spencer Tracy worked sixty-nine and Robert Young sixty-eight. The recording of the score required a sixty-piece symphony orchestra and a male chorus of sixty, working for an entire week.

The most picturesque set built for the production and one of the most notable in any picture was that of "Crown Point." Containing 110,000 board feet of lumber, the building was 200 feet wide, 300 feet long and averaged 40 feet in height. Six acres of state forest land were cleared for the site.

Radio Chief McCosker Back Home After Strenuous Visit

Alfred J. McCosker, chairman of the Board of Directors of the Mutual Broadcasting System and president of WOR, New York, accompanied by Mrs. McCosker, left Hollywood for his return to New York on February 17. While on the west coast he had met many old friends, had been so well entertained by them that he remarked he had not seen so much of the California sun but had become quite well acquainted with the California moon.

In the old days—when the world was young or at least younger maybe—Mr. McCosker had been affiliated with motion picture trade papers in New York. From the inception of the radio he had been fascinated by it, by its possibilities. He was one of the first commentators. In 1922 he had started a series of broadcasts of thumbnail sketches or reviews of motion pictures. That was the introduction to the new radio of the not so much older screen.

Mr. McCosker now is rated as one of the veteran radio men. He is a youngish looking veteran at that. His present visit was his first trip to the west coast. His friends are hoping there will be many others.

Quality of Sound Advances by Improved Cardioid Mike

Another advance in the quality of sound as heard by radio listeners and movie patrons will result from the introduction by Western Electric Company of an improved cardioid directional microphone. According to the manufacturer, the new device is, in effect, six distinct microphones in one compact unit.

At the flip of a small switch, contained within the instrument, the new mike adapts itself to the individual acoustic pattern of any studio or remote location. Sound engineers thus have wide control over the effects of acoustic conditions on the character of reproduced speech and music.

Sequences Are the Heartbeat of Travelogues

By Charles W. Herbert, A.S.C.

An interesting scene can always be handled like this. Writer and Cameraman Herbert shows his tools to Captain John R. Hughes, oldest living ranger captain, at El Paso, Texas. The captain's work on the Ranger force is done with a six shooter.

THE title for a Universal Going Places reel, now in process, will be "Down El Paso Way." Like most travel films of the west, its main theme is Western Hospitality, emphasized with cowboys, boots, saddles and big country.

There's hardly a town or section of the west that makes a bid for the tourist trade but what emphasizes its hospitality, and travelogues are rightly made up of scenes and sequences of things that interest the tourist. In selecting material for a travel film, the cameraman must look for things which are photogenic, are typical of the region and which can be worked up into smooth running sequences.

Of all western locations which boast about their hospitality and prove it with a warm handshake, El Paso certainly tops the list. Their Rancheros and Sheriff's Posse, mounted organizations, extend the big hand of welcome to prominent persons or large groups of tourists arriving in their city.

Both of these organizations are made up of business men, determined to keep the tradition and color of the Old West alive. They maintain horses, sport full rigged western outfits, six shooters included, and take time off from work to meet the trains and escort their guests through the city to their hotel.

Many cities have the Mayor or the Chamber of Commerce run down to give the key of the city to visiting celebrities, but such ceremonies are usually stiff, uninteresting and lacking in color, good for news reels but not for travelogue.

Importance of Lead

The lead sequence to any travelogue reel should be most carefully selected and made. It should introduce the subject with scenes which give a convincing picture of what the location looks like, whether desert, sea coast, plains, rural or mountainous.

Then the succeeding scenes of logically connected action should emphasize the theme and work in local backgrounds whenever possible. The Rancheros welcome has all the elements for a bang-up introductions to "Down El Paso Way."

I believe that the making of this introductory sequence is one of the most outstanding examples of how to select and connect the essential scenes. After the theme was decided on I made a survey of the available sets, taking into consideration the direction of the light during the working day period. A working script was prepared and the subject covered accordingly.

Usually if a cameraman has all the things he wants to work with on one spot he can turn out a good rounded sequence of shots without a working script. But when the scenes will have to be made in many locations and on several different days, it is best to work from a scene list. Here is the actual script:

1. High shot looking down on San Jacinto Plaza as transcontinental train goes west on tracks in foreground. Skyscraper of El Paso in background, mountains in distance.

2. Semi-closeup from moving train as Rancheros, etc., and stagecoach come alongside.

3. General view follow shot from San Jacinto Plaza. Rancheros and stagecoach going alongside train. Tourists looking out of windows.

4. C. U. from inside train. Tourists in foreground looking out of windows at Rancheros.

5. Ground shot G. V. from low angle over the railroad tracks. Skyscrapers in background as Rancheros, etc., come around corner, then pan to include train on right.

6. G. V. looking down street parallelling railroad track near station. Transcontinental train coming towards station. Rancheros, etc., alongside.

7. G. V. at station platform looking down tracks as train pulls into yard. Group of Rancheros in foreground waving hats.

8. Low shot, cowboy boots in fore-

UNRIVALED PERFORMANCE

NO wonder cameramen place full confidence in Eastman's three negative films. They know that each offers specialized ability to meet modern production demands. Even more important, they know that every foot will have the same high quality, the same unvarying dependability. Eastman Kodak Co., Rochester, N.Y. (J. E. Brulatour, Inc., Distributors, Fort Lee, Chicago, Hollywood.)

PLUS-X
for general studio use

SUPER-XX
for all difficult shots

BACKGROUND-X
for backgrounds and general exterior work

EASTMAN NEGATIVE FILMS

Closeups of pretty girls with horses are always good.

ground as engine drive wheels pass in background.

9. Lo. S. C. U. two boys with Texas long horns frame front of engine as it comes into station.

10. Lo. S. looking up as cars pass. Rancheros in foreground shooting pistols into air. Tourists looking out of window.

11. G. V. tourists getting out of train. Rancheros on platform greeting them.

12. C. U. cowboy shaking hands with girl.

13. Full C. U. hand shaking.

14. G. V. from train vestibule as rest of tourists step out of car and are greeted by Rancheros.

15. C. U. small boy tourist standing beside Ranchero looking up at six shooter

16. G. V. as last tourist comes out of train and group moves away.

17. G. V. tourists coming out of station, passing through lines formed by typical Mexican orchestra and then getting into stagecoach. Ranchero holding door open.

18. C. U. tourists coming from station, two musicians in costume in foreground.

19. C. V. tourists getting into stagecoach. Ranchero lifting boy up to top.

20. G. V. fullview of station as stagecoach flanked with Rancheros and Sheriff's Posse leaves station on way to hotel.

21. G. V. downtown corner old church on right and new Federal Court House on left. Stagecoach coming around corner.

22. G. V. stagecoach coming around corner towards camera.

23. G. V. from stagecoach looking out of window. Group of Rancheros riding alongside—skyscraper in background.

24. C. U. Rancheros riding alongside stagecoach. Camera inside coach.

25. H. S. looking down from roof of Grand Hotel as stagecoach, Rancheros, etc., come down street towards Paso del Norte Hotel.

26. G. V. as stagecoach arrives at Paso del Norte Hotel and tourists get out. Rancheros on sidewalk greet them.

27. C. U. tourists getting out of stagecoach and shaking hands with Rancheros.

28. Lo. S. looking up as Ranchero takes boy down from top of stagecoach, skyscraper in background.

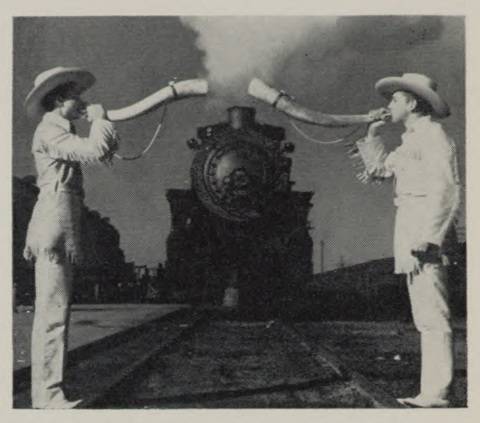
29. Full C. U. tourist shaking hands with Ranchero.

30. G. V. from inside hotel looking out through doorway as tourists get out of stagecoach and come into hotel.

31. G. V. inside hotel lobby, looking toward reception desk, bell boys passing with bags, tourists coming up to register and Mexican orchestra closing in around them.

32. Semi C. U. tourists registering, framed with head and shoulders of orchestra players in foreground.

Closeups like this are vital to the making of a good movie.



33. C. U. tourists registering. Mexican hat framing picture in foreground.

34. G. V. behind reception desk looking down as tourists register and Mexican orchestra plays in background.

35. C. U. from behind desk as tourists register.

36. C. U. tourist's hand signing registration card.

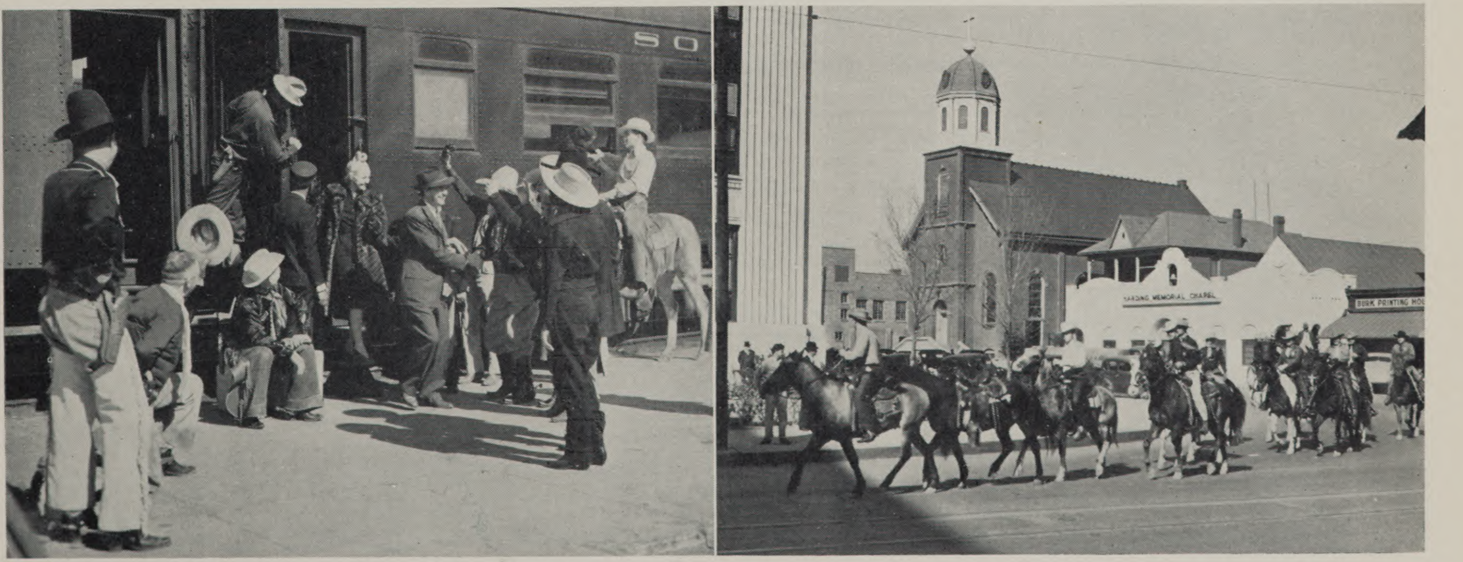
Not All on One Day

While most of this sequence was made in one day, several scenes had to be made on other days when it was most convenient. The first scene, No. 1, a high shot looking down as the regular transcontinental train comes into town, was made one morning.

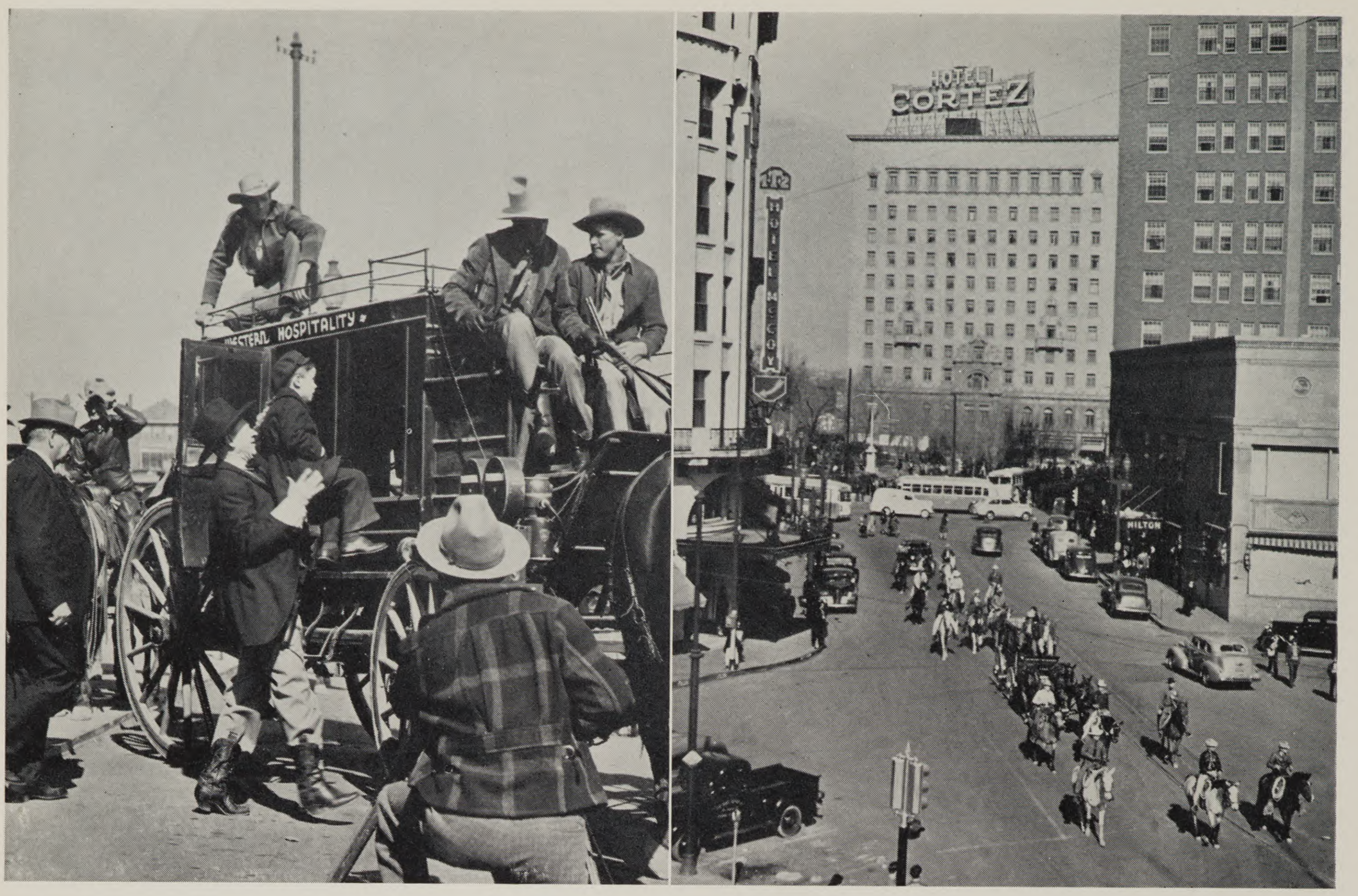
The next morning, the closeup Scene No. 7 shot of the Rancheros waving the engine into the station, was made, using the same daily train. On the same morning Scene No. 8 of the engine drive wheels was made as the train pulled out of the station.

To get the scene of the long horns framing an incoming engine, Scene No. 9, it was necessary to come back the next day when the next regular transcontinental train was arriving.

Scenes 2 to 6 inclusive were only possible by having the use of a special train (switch engine and two coaches)



Left, this well worked out scene shows how the El Paso business men dress as cowboys meet visitors in the city. Right, in parades or similar outdoor action, corner turning shots are good.



Left, angles and closeups of good action are handled like this. Right, the cowboys and old stagecoach are shown here on the main streets of El Paso. Buildings in the background usually furnish good framing for a shot.

as trial runs had to be made and there was only one camera available. The same action had to be repeated for each different camera angle.

As scenes using the tourists and Rancheros were made on several different days it was highly important to make sure that they wore the same clothes each day.

All of the scenes using the stage coach and horses were made on the same day. When the Rancheros were needed on the station platform it was not necessary to have horses there. The interiors in the hotel lobby required lighting and were done at night on a separate day.

Staging Closeup

In changing from the general views to closeups it is usually most convenient and economical to allow the action to carry through until it reaches a logical place for a closeup cut in. Stop the action, then move the camera in and make the closeup as the action is continued.

For example, in Scene No. 26 the camera was placed where it took in the whole stagecoach as it stopped in front of the hotel. The door of the coach was opened by the porter and the tourists started out. By the time two tourists had stepped out there was sufficient footage run off for the general view, so the action was stopped just as the third tourist was stepping out of the stagecoach.

The camera was quickly moved up so as to fill the screen with this tourist and the Ranchero as they shook hands, and the action was continued for one handshake only.

When a feature production unit makes such a sequence they have several cameras all trained on the set from different angles, thereby getting all the shots with one run-off of action. But the travelogue cameraman with only one camera must repeat the action as many times as necessary to get all angles. His task is made doubly hard by the necessity of keeping the characters and action exactly alike in each take in order that the scenes will match for cutting.

It is obvious that the filming of such a sequence as the Rancheros reception required a lot of careful planning and arrangements for cooperation between the various elements concerned. This took time, and generally speaking it would not be economical to put in as much work and time on every sequence that goes into a travelogue reel.

It is, therefore, essential that a cameraman be able to locate and cover other sequences with a minimum of effort and time. He must be able to view the set and subject with a picture eye that quickly analyzes the camera angles available. With a set prepared it is wise to start the work right away with a general view and follow up with angle shots and closeups.

An experienced man should be able to plan his next shot while he is making one. In this way you have the assurance that each shot will dovetail if it is inspired by what you see in the camera while making the preceding one.

Once you start on a sequence it is wise to try to complete it as soon as you can, so as to avoid the possibility of scenes not matching due to some essential elements in your set moving away, new ones coming into the set, or disastrous lighting changes in between scenes.

LIST OF SCRIPT ABBREVIATIONS

L. S.—Long Shot, scene taken from a great distance.

G. V.—General View.

C. U.—Closeup.

Semi C. U.—Medium Closeup.

Head C. U.—Closeup of head only.

Mass Shot—Screen filled with crowds of people, eggs, cattle, etc.

Hi. S.—High Shot, camera looking down.

Lo. S.—Low Shot, camera looking up.

Full View—From head to foot or from top to bottom.

Pan.—Panorama, camera moving to right or left across scene.

F. S.—Follow Shot where the camera follows a principal actor across the set.

Tilt—Tilting the camera up or down.

A. S.—Angle Shot, usually made at an angle through some integral part of the set.

Trucking or Dolly Shot—Where the camera is on wheels and moves across the set.

Handicaps Against India's Film Production

By F. BERKO

In Two Parts—Part II

(2) Sound.

Sound, on the whole, is far better off than the other departments. Equipments, generally speaking, are of quite a good quality, and RCA and Western Electric are used by several studios. The technicians are mostly self-trained, as in the other departments.

But while the quality of the camerawork, the sets, etc., is of no great concern to directors and producers alike, the reproduction of sound is of major importance to them because, as said before, the success of a film depends mostly on the appeal of its songs.

Consequently, while photography, settings, continuity, editing, and even acting may be indifferent, sound should be good, and for that reason the sound technicians, although usually poorly paid, have on the whole a much greater say than most of the other staff members, and because of that are able to give a better quality.

The main drawbacks are a certain immobility of the mikes, their low sensitivity (factors which again impose more difficulties on the cameramen's work), which is necessitated, though, by the fact that the studios are not sound-proof; insufficient facilities for mixing the sound from different microphones—as a rule, there are not more than two mikes at any time; and the lack of rerecording machinery—to my knowledge, hardly four-five studios can rerecord—which makes a complete synchronization very difficult.

Hence, one of the main faults of the sound in Indian films is its uneven level and, apart from a lack of a fitting background music, which is not the technicians' concern, though, the lack of a satisfactory synchronization throughout the entire film.

With this is not meant that the shots are out-of-sink—although this occurs frequently, for reasons given later, but the failure to maintain a continuous, even, or, according to the mood and situation, varied, sound track.

Because of the certain immobility and insensitivity of the microphones, the songs are frequently prerecorded and the shots taken as playbacks.

No Written Music

This goes some way to help over the fact that, although the songs are timed, there is no possible means in Indian music to divide it in exact periods, or make it last for exactly the time provided, because there is no written music, and the orchestra, consequently, has to follow the singers. In turn they may or may not let themselves be guided by the music director and orchestra leader.

Although most of the singers are quite capable of giving the correct lip movements during their playbacks—i.e. of repeating their recorded songs at the same speed—there are naturally some occasions when they are apt to get out-of-sink.

As furthermore the methods for synchronizing the beginning and end of the songs at the prerecording and the playback are mostly self-created, and of not too exact a nature, there is an increased danger of non-synchronization, in addition to hours and hours of tedious and annoying editing work in some of the companies.

(3) The Laboratory.

If I said before that the laboratory chief and the cameramen often put the blame for bad results on each other, so was this pretty universal occurrence certainly not cited with the intention of accusing the former.

He and his staff, like the rest of the technicians, are the people least to blame and least to envy in the Indian film industry.

They all are, practically without exception, serious, willing, and hard-working men who are trying to do their best under very difficult conditions.

The laboratory workers' greatest handicap is the climate. The temperature varies between 80 and 120 degrees in different parts of the country at different times of the year, and during the rainy season the relative humidity of the atmosphere may rise up to 97 percent.

To Americans air-conditioning would seem to be so natural a solution to this problem that it might be hard to imagine that air-conditioning is not a reality everywhere. But there are only two or three air-conditioned laboratories in the whole of India, and in addition perhaps another two or three in which there is some provision made which enables the laboratory chiefs to be absolutely certain of fairly consistent results.

High Humidity Content

In the rest of the laboratories—and I am now not talking about the many companies in which developing is still being carried on by rack-and-tank methods, with tap or well water to which ice is added haphazardly, but about automatic laboratories, the negative is not entirely

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Continuous Projection Put on by B & H Filmo Master 8

Motion pictures in window and counter displays are nothing new, but heretofore, unless costly 16mm. continuous apparatus was used, it has been a bother for the dealer to rewind and rethread each time the reel was exhausted. Now comes Bell & Howell with an attractive, six-color, cardboard cut-out display involving a continuous projection arrangement that is so simple one wonders why it hasn't been used before.

The new B&H display promotes the recently-announced Filmo Master 8mm. projector, which forms an integral part of the basic unit. Briefly, the film is led around four rollers (regular B&H stock parts, recessed to minimize wear), forming a vertical, rectangular loop.

The projector rests in the center of the loop, on a raised base, and the right edge of the film loop is threaded in the mechanism. The continuous loop is formed of 76 inches of film, enough for two or three scenes of average length or twice that many of newsreel type. The picture on the silver screen calls for a throw of about three feet, and is described as brilliant and clear even during daylight hours.

immersed in the solution, the temperature of which can still be fairly well controlled.

Hence, on account of the fact that it comes into contact with the air in the laboratory, which is of a different temperature, and sometimes of a high humidity content, there is introduced an uncontrollable factor which must necessarily negatively influence the final result.

To my suggestion that at least a chart should be made up which might enable the laboratory chief to subtract fixed periods from the developing time according to the temperature and the degree of humidity prevailing in the laboratory, in several cases the answer was that in the first place there were no hygrometers; and that, moreover, even if there were, they would not be able to spare the time to use them because they were overburdened with work already, anyway. Here again, then, it is mainly the lack of proper organization which is to be blamed.

(4) Editing.

In many companies not only the cameraman but the rest of the personnel, including the director and the producer, or director-producer, have to suffer from the practice of not seeing any rushes.

Incredible as it may seem, the editing is often done with the negative and the final result not seen until the first trial —which, incidentally, may last anything from three to six hours, counting the running time only.

There are very few editors in our meaning of the word, and it is the director who usually does the "fine" cutting on the film which has been roughly prepared—edited—for him by the "editor" and the "assistant director" (who were previously told by the director which takes they had to put in).

Although, this may be quite admirable sometimes, in theory, in practice it means an enormous wastage of time and hence money, which a small company cannot very well afford as a rule, and an overburdening of the already heavily overburdened director.

Moreover, it is evident that the negative itself must necessarily suffer, even if it is handled with cotton gloves and treated with great care—which it not always is.

The percentage of negative material used in the final (about 12-15,000 feet) version is sometimes as high as 30 or even more and, with all the difficulties existing in the production process, some of which have been explained in this article, it is easy to see that the quality of the average Indian film must leave something to be desired.

Lack of Organization

The lack of organization which, as pointed out again and again, is the chief source of most of the troubles described, spreads even to the last portion of actual production work; because, although the producer can never really know when he will be able to finish any particular film, he nevertheless fixes, and has to fix, of course—a release date.

Often this date cannot be held and has to be delayed over and over again, the exhibitor, distributor, or theatre owner clamouring for the film over which the director and the editor, with their assistants, are working for days and nights on end.

I myself have been witness to several cases in which the first reels of a film were given their maiden showing in an afternoon performance—there are no previews in our sense—while the rest of the print was still in the laboratory and had to be rushed to the cinema in question!

As often this is only the second print of that particular negative, and as it is done in such an extreme hurry, it can hardly be of uniform quality, and again the technicians are being blamed for something which is definitely not their fault.

Laudable Exceptions

In conclusion, let me emphasize once more, at the danger of repeating myself, that while the conditions described prevail in the majority of the Indian film companies, there already are a few—though a very few—laudable exceptions to the rule.

It is mainly the lack of proper organization, and nothing else, which causes most of the difficulties in Indian film production proper; that this article is certainly not intended to be an attack on the young and striving film industry in this country, but as honest, objective, unbiased, and unprejudiced a statement of facts as is possible to be given by someone who, with years of experience in Europe, has been working in the Indian film industry for a year and a half and who has had ample opportunity to experience and study working methods in this country.

Moreover, the majority of the intelligent, honest and self-critical men working or interested in the industry agree as to the main points as given in this article, and have frequently openly expressed themselves in that sense. Only by frankly admitting faults and by subsequent efforts to get rid of them will the Indian film industry be able to raise itself to that level which it should be able to attain by reason of the talent, intelligence, determination and capacity for hard work of its members.

Cameraman Krasna Despite Leaping Lion Gets Picture

Shooting lions and leopards is a job which demands cool, steady nerves whether a man is aiming a gun or a movie camera.

Heartily subscribing to that theory is Milton Krasner, A.S.C., Universal cameraman assigned to photograph action scenes for the jungle film, "Zanzibar."

"The important thing is to keep the camera turning no matter what surprising event may pop up," Krasner explains.

"As an example," he remarked, "there is a scene in the picture in which several lions break loose from their cages inside a walled compound. All the players carried long poles and rope nets to protect themselves when they moved in to catch the beasts. But there I was, flat on my stomach on the ground beside the camera. The lions were just fifteen feet away.

"Suddenly, one of the lions turned and leaped directly over the camera about two feet above my head. The hair stood straight out on my neck," Krasner admitted. "Only force of habit make me stick with the camera instead of trying to climb a nearby tree."

Although Krasner refused to consider himself "brave," he did keep the camera turning despite his fright. And the scene which resulted provides one of many thrilling highlights in the picture.

Research Council Announces Expansion of Its Activities

Darryl F. Zanuck, chairman of the Research Council of the Academy of Motion Picture Arts and Sciences, has announced the expansion of the Research Council's activities to investigate problems important in the fields of laboratory processing, photography, cine-technology, sound recording and optics.

At a meeting of the Council it was decided the Council's experience in handling cooperative development on a large scale in the field of sound recording and sound reproduction could be utilized to the benefit of the industry by an expanded activity in these other fields.

"Basic committees" were appointed by the Council in each of these fields and the chairman of each basic committee will be given the complete responsibility for putting the Council's plans into operation within his own field. Basic committee chairmen appointed include John Nickolaus, laboratory; John Arnold, photography; Grover Laube, cine-technical; Loren Ryder, sound; B. F. Miller, optical.

In addition to these new activities Mr. Zanuck announced the reelection of Nathan Levinson of Warner Brothers studio as vice-chairman of the Council, and the appointment of Darryl F. Zanuck, chairman; John Aalberg, E. H. Hansen, and Nathan Levinson as financial committee.

Marks and Fuller Distribute

Marks & Fuller, Inc., photographic distributors, of Rochester, N. Y., have been appointed exclusive distributors for the new DeHaven Iconovisor Automatic Filmstrip Projector.

The Iconovisor was designed and developed by T. V. DeHaven, a former engineer for General Electric and RCA, who now holds all patents and manufacturing rights.

MAKING TITLES THAT WILL STAND UP

By JAMES SHERLOCK

Australian Amateur Cine Society

INCORRECTLY centered titles are a common fault with amateur films. Some cameras are or can be fitted with a parallax compensating device to overcome this trouble.

A few camera manufacturers make a special titling outfit to suit their cameras, but most of these are too small to be of practical use. Typed and ordinary hand written titles appear amateurish.

At various prices a great number of lettering outfits are to be bought that are specially made for the moviemaker, while the ultimate in titles are those made by professional ticket writers who are able to vary their style of letters.

If an 1¼-inch board 4 feet 6 inches long and 1 foot 3 inches wide is procured, a title holder can be mounted at one end and a sliding base for the camera joined to the opposite end by two 1-inch brass rods. With the use of this apparatus the size of title cards may be varied.

The following table compiled by Bell and Howell shows approximate areas covered by their cameras at varying distances up to 4 feet:

Some 8mm. cameras are fitted with a 13mm. lens which covers a slightly smaller area than a 12½mm. lens, but whatever camera is used keep a generous margin round the wording to allow for variation between different cameras.

8mm. Camera £	16mm. Camera	Plane	Distance from Camera in Feet 1.	2.	3.	4.
12½mm.	25mm. or 1″	Horizontal	.41	.82	1.22	1.63
		Vertical	.29	.58	.88	1.17

The titler should be strongly constructed, particular attention given to the base which is to hold the camera. This must be heavy enough rigidly to support the camera without permitting side play so that the film in the camera will remain parallel to the title card. The lens of the camera should be set at a spot which strikes the exact centre of the title card. This is important as accuracy is essential.

Below are different methods of shooting various sized titles with either a fixed focus or a lens that has a universal focusing mount.

Every lens manufacturer makes a supplementary lens which fits in front of a 25mm. lens. These are known as portrait lenses and can be used to photograph titles, but the size of the field they cover is fixed and limited.

The following is a better method to adopt if the camera is fitted with a lens that screws into its mount. By unscrewing the lens critically sharp titles may be shot at any distance down to 8 inches.

The following table shows how far a fixed focus lens should be unscrewed from its mount to permit this. It is advisable to purchase half a dozen washers varying in thickness from 1/32 inch to ¼ inch. These can be placed between the lens and the camera as required to permit the lens to fit snugly in its correct place.

To obtain sharp focus with a fixed focus lens at:

Distance of	7 feet	unscrew it	¼ turn
“ “	6 “	“ “	⅜ “
“ “	5 “	“ “	7/16 “
“ “	4½ “	“ “	½ “
“ “	4 “	“ “	⅝ “
“ “	3½ “	“ “	¾ “
“ “	3 “	“ “	⅞ “
“ “	2½ “	“ “	1⅛ turns
“ “	2 “	“ “	1⅜ “
“ “	1½ “	“ “	2⅛ “
“ “	1 foot	“ “	3 “
“ “	8 inches	“ “	4 “

If it is desired to photograph objects at a closer distance than that marked on a universal focusing mount lens set it at infinity and use the above table.

A convenient size for a title card is 1¼ inches by 11 inches using letters no smaller than ⅜ inch high. If a border of 2½ inches is allowed twenty words can be used, the maximum recommended for any one title.

When wording titles, make them as brief as possible. For each title use simple language containing a complete sentence correctly punctuated. Humor in titles should not include fashionable catch phrases. These at a later date become very stale.

If the titles are to be shot with artificial light care should be taken that high powered lighting is evenly distributed on the title. A better method is to photograph them in daylight using the smallest stop possible. In the northern hemisphere have your TITLE face the north and in the southern hemisphere have the title face south. This will give an even light that can be measured with any exposure meter.

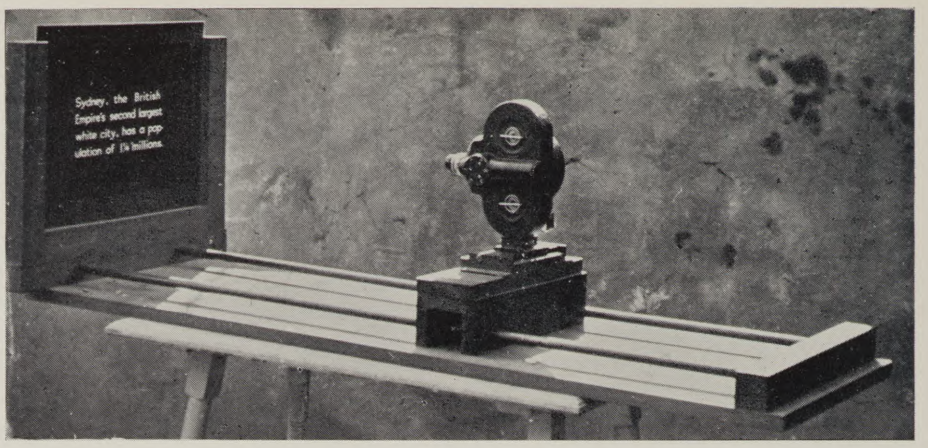
Positive film is not recommended. It is slower than panchromatic film and liable to show halation. It reverses the tones and cannot be used if moving backgrounds are to be added.

These backgrounds are not difficult if the titles are shot first, a note made of the footage used for each and dark tones chosen for each scene. Of course the reel of film must be rewound before the film is replaced in the camera and the backgrounds under-exposed one stop.

After loading the camera it is a good plan to remove the lens and run the film through till the identification perforations appear. These are about four or five feet from the start of the film and mark the spot where the processing station cuts the film to join a leader. When the perforations appear immediately stop the camera and set the film measuring indicator at 0. By this means you will be able to identify any spot on the film.

Many types of still backgrounds are effective. Wallpaper, fancy paper, colored paper, oilcloth and enlargements from frames of your own film are excellent. Borders containing straight lines should be avoided.

Subsidiary titles should not be more elaborate than the main title. Fades are simple to make by either opening or closing the lens while the camera is running. Trick titles are not as effective in



Build your titler strongly with a camera base that can be moved to or from the title.

an amateur film as simple titles. Black and white titles seem out of place in a color film. The background for these should be colored to match the prevailing color of the film.

It is a difficult matter to suggest the timing of a title. There is a time lag from the moment a title appears till it is registered. With some people this is more marked than with others. Then again unusual words might be used. If the cameraman slowly reads the title through one and a half times as he is shooting this title should be of the correct length.

Another method for 16mm. cameras when using a film speed of 16 frames per second is to multiply the number of words by one and a half, make this amount inches, then allow another six inches and you have the length of film to use. Thus a title of 20 words would need a piece of film 36 inches long. For 8mm. cameras halve the number of inches mentioned, e.g. a 20 word title would be 18 inches long.

Another type of supplementary lens which solves the focusing problem when it is not possible to unscrew the lens out of its mount is the ordinary spectacle lens, which may be placed close to the front of any camera lens regardless of its focal length.

These lenses are actually magnifying lenses, the power of which is measured by units known as diopters. If an ordinary spectacle has a refractive power equal to that of a glass the principal focal length of which is one meter, it is then a one-diopter spectacle.

By replacing this particular spectacle lens in front of a 25mm. fixed focus lens or a 25mm. universal focus lens set at infinity you are able to photograph titles at a distance of one meter.

Spectacle lenses which vary from one-quarter diopter to 20 diopters may be purchased from opticians. For the purpose of titling only seven different cheap spectacle lenses will be necessary to photograph titles which vary in area from 14 inches by 11 inches down to 4⅛ inches by 3¼ inches. For lenses that have a universal focusing mount set the distance calibration at infinity.

Diopter Unit	*Size of Title	Distance from Center of Supplementary Lens to Title
1	14″ x 11″	3′ 3″
1.25	11½″ x 8¾″	2′ 6″
1.5	10″ x 7¾″	2′ 2″
2	8½″ x 6½″	1′ 8″
2.25	7″ x 5½″	1′ 6″
3	5⅞″ x 4¼″	1′ 2″
4	4⅛″ x 3¼″	10″

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* These sizes are only approximate as the aperture of cameras and projectors are subject to slight variation.

HIRSTS' 8MM. CHARMS PHILADELPHIA CINEMA

EVERY once in a while, the opportunity is presented to amateur cinematographers to witness the work of another amateur which is outstanding in its field. Such an occasion occurred at the February meeting of the Philadelphia Cinema Club.

Presenting an 8mm. all color story of the West, entitled "In The Heart of The Rockies," in 4 reels, a complete one hour show was put on by Mr. and Mrs. Francis Hirst, both of whom are members of our organization.

Presentation of the film itself was accompanied not only by music via the double turntable method, but also with explanatory remarks, via the microphone, which came through every now and then over the same 12-inch speaker which handled the music. Using as much light as possible, Mr. Hirst showed a full 6 foot image from his 8mm. film.

There are many times when viewing films of scenery as taken by amateurs where you get misconceptions of distance and of the difficulties encountered in taking the pictures. The results put on by Mr. and Mrs. Hirst fully demonstrated the work, forethought, planning, editorial treatment, continuity and difficulties encountered in securing the shots, of which their film was built. Good use was made of the turning leaves of a book to divide the film into its component parts, good use was made of sound effects, as well as the musical records, approximately 20 records being used in addition to the time out for the microphone talks.

The film itself covers water, sky, mountains, valleys, flowers, trees, and all the coloring of nature to be found in Northwestern United States and British Columbia. Scenes in Victoria, scenes in Banff, around Lake Louise with which all of us are familiar, were presented in an entirely different manner.

Good use was made of the scarlet tunic of the Canadian Mounted Police to highlight the color scenes.

A special treatment in photographic effect was evidenced when Mr. Hirst was able to get a scene of the lowering of the American Flag from a ship in the port of Seattle, passing through the smoke cloud from the funnel of the ship.

Unusual scenic effects with just the right amount of people in them to maintain human interest was carried all through this show.

No record of this showing would be complete without special mention of the work of Mrs. Hirst, in laying out the original musical score, and her brilliant handling of the turntable controls where she officiated as sound engineer.

It is not often that the efforts of 8mm. filmers are rewarded by results, such as those obtained by Mr. and Mrs. Hirst.

B. N. LEVENE,
Chairman of Publications Committee.

Southern Cinema Club News

The Southern Cinema Club held its first annual banquet and contest on January 23, celebrating one year of 8mm. and 16mm. activities. Sixty-seven movie enthusiasts attended the affair, which was held at Uncle Gabriel's Log Cabin in Downey.

Mr. Niersbach, outgoing president, installed the following officers for the year 1940:

A. B. Callow, president; J. O. Law, vice president; Don Hunt, secretary; Vernon Larson, treasurer.

Claude W. Cadarette, President Bill Wade, and John Walters of the Los Angeles 8mm. Club were judges for the contest pictures. Mr. Cadarette acted as spokesman and gave comments on each of the following prize winning pictures which were shown:

First prize winner, "Summer's Holiday," photographed by Miss Elizabeth Earl; second, "Blue Monday," A. B. Callow; third, "Catalina," Mrs. Helen Niersbach; fourth, "Primitive Patzcuaro," Miss Louise Arbogast; fifth, "Rose Parade," P. M. Niersbach; sixth, "First Holy Communion," photographed by Vernon Larson; seventh, "A Dream Comes True," Miss Doris Lee.

STUDYING PHOTOELECTRIC EXPOSURE METERING

By CAPTAIN DON NORWOOD, U.S.A., Retired.

Part IV

A REVIEW of our entire study to this point will reveal the following: The conventional photoelectric meter which measures light reflected from a scene actually measures the flux density of light striking the cell.

This flux density is determined by the following factors:

Brightness of objects in the scene,
times the
Relative area of each such object.

The brightness of objects in the scene depend in turn on the following:

Reflectance factor of each object
in the scene,
times the
Incident illumination.

It can be seen that many elements are thus involved when reflected light is used as a guide to photographic exposure. What seemed on the surface to be a simple straightforward procedure of pointing the meter at the subject as the camera is pointed is actually quite complicated, with many chances for elements of error to enter.

On the other hand, the measurement of incident illumination from the subject's position, while apparently not such a natural action, is actually a simple direct method that eliminates all the more serious elements of error.

Such measurement for photographic purposes will indicate exposure controls that will give negatives which take full advantage of the values latent in the film emulsion.

Meter's Design

Since cinematographers doubtless desire to get the most out of every foot of film exposed there may be some interest in a discussion of the design features of an incident illumination type of exposure meter.

The design of such a meter would be vastly simplified if all photographic subjects were two-dimensional, flat like the reflecting surface of a test stand in a laboratory; and if all illumination came from a position directly beside the camera.

In such a case a meter similar in design to the reflected illumination type could be used for the purpose. It would only be necessary to recalibrate the meter so that the readings would be significant for the purpose. Such a meter, used at the subject's position, would be pointed at the light beside the camera, and that would be all there would be to it.

In actual practice, however, we find that photographic subjects are generally three-dimensional, quite solid; and that the illumination is liable to come from almost any angle, or from several at once. To be effective the meter must take these factors into account.

We are safe in observing that while photographic subjects are usually three dimensional, the camera sees only about half way around them. Thus using a sphere as an illustration, the camera sees only the front half of a sphere or a hemi-sphere. The illumination on the portion the camera sees is all that should be taken into account in determining exposure.

Temporarily ignoring artistic effect, it is a fact that the most efficient illumination on a photo subject would come from a light source located right at the camera position. In this case the light would go directly to the subject and be reflected directly back to the camera.

From All Angles

If the light source is moved to one side the reflection of light back to the camera is through an angle and consequently less efficient. Therefore a meter to measure incident illumination must take into account not only the intensity of the incident illumination, but also its angularity with respect to the subject and camera.

If several sources of illumination are used it must do this for each and every one of them. Since artistic photography demands illumination from various angles the practical meter must be designed to take care of this situation.

This requirement can be met by the following method: Since the meter is used at the subject's position let the sensitive surface of the meter be designed in a simple geometric form to represent the various surfaces which might be presented by a photographic subject in the same location. A spherical shape will do. Since the camera sees only the side toward it a hemi-sphere will be sufficient.

Consider a light sensitive photoelectric cell made up in the form of a hemi-sphere. Let this be located at the subject's position and pointed toward the camera. All illumination which would be photographically effective on the subject would impinge on the hemi-sphere.

Suppose there is one source of illumination only, located adjacent to the camera.

Consider the Light

In this case the hemi-sphere would be completely covered with light and a maximum reading would show on the meter

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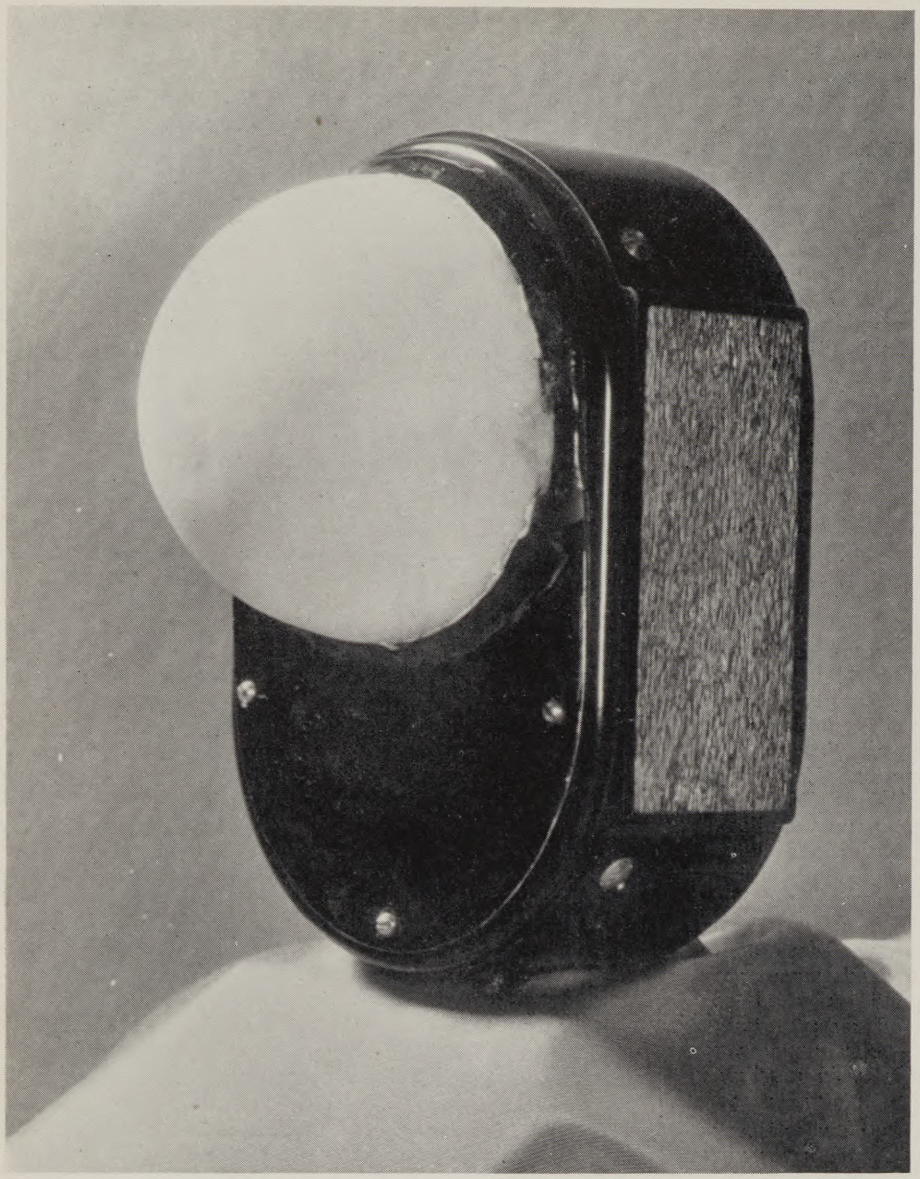
Little Ahead of Schedule, Parkers Parking in Mexico

Harry and Harriette Parker of the Los Angeles Cinema Club—and also confirmed readers of a cinema magazine the name of which we are too modest to mention—have sent a postcard from Mexico City. They strolled down below the border on their own rubber, and in the course of their travels have made side trips, in fact admit to having made 'em all. They report many American tourists looking over the country the same as they are, and like them carrying a wide assortment of photographic impedimenta.

Usually the Parkers exercise restraint in the frequency of their trips abroad, limiting themselves to once, say, in two years. In October 1938 they took a four months' trip around South America, with many side trips. During the year they drove to New York to look over the fair, incidentally picking up a new car in Detroit, and visiting many other cities more or less in between the Atlantic and the Pacific.

For the enjoyment of their many friends they will be sure to bring back the bacon—in the form of projection stills and 16mm. film of Mexico.

There are rumors the next journey will be to the South Seas, although it is certain the rumors will not become facts until the return from Mexico. With the Parkers, it seems, there never is but one grand trip in the air at a time. Concentrating on one definite objective at one time enhances the pleasure of anticipation. Which is as it should be.



"The incident illumination meter has a hemi-spherical illumination pick-up surface that responds to light coming from any effective direction."

dial. This maximum reading corresponds with what we know about the most efficient illuminating position for a light being right beside the camera.

Consider the light to be moved sideways away from the camera until a 45 degree angle is formed by light to subject to camera. The illumination on the hemi-sphere would now make it resemble a three-quarters full moon. The meter reading would be less, thus indicating more exposure required. This corresponds with experience which teaches that more exposure is required for cross-lighting than when full front lighting is employed.

Measuring Effective Intensity

Let the light now be moved around to the side of the subject so that a 90 degree angle is formed by light to subject to camera.

The light falling on the hemi-sphere would be less, the illuminated portion now presenting the appearance of a half moon. Consequently the meter reading would be less, which again corresponds with what experience teaches, since we know that a setting of the camera exposure controls for greater exposure would be necessary.

Moving the light still further around behind the subject will give the appearance of a quarter moon on the meter's hemi-spherical surface. Consequently the meter reading will be still less, and larger exposure control settings will be indicated.

All the foregoing described action takes place independently of the absolute intensity of the light. The meter will of course be sensitive to changes in that also.

Record of 90 Percent

What a meter of this type does is to measure the *effective intensity* of the illumination on a photographic subject. If a number of sources of illumination are used the meter will automatically integrate the effective illumination from all of these sources and give one significant reading from which may be directly determined the proper exposure control settings to be used on the camera.

The negatives resulting will all correspond to the Ideal Exposure described in Part II of this series. These negatives may all be printed on one printer setting.

It is hard to imagine the simplicity of operation of such a device and the gratifying results to be obtained with it and especially the feeling of confidence that it gives, until one has used it for some time. The writer has used one for approximately two years under all sorts of conditions; different parts of the country, different times of the year, different times of the day, in shade and in sunshine, in flat light and in contrasty light, exteriors and interiors, sunlight and incandescents.

Perhaps the writer's esteem for this type of meter may be understood when it is stated that of the still picture negatives taken under the conditions enumerated above 90 percent printed on a contact still printer at five seconds' printing time. Of the remaining 10 percent, about 8 percent showed departures of not over 1½ seconds from the 5 second standard. The extreme cases represented in the remaining 2 percent of negatives printed between the limits of 2½ seconds and 10 seconds.

Motion picture negatives all printed with approximately the same exposure. Kodachrome natural color pictures on 16mm. all turned out very successfully. This after some rather dismal failures had occurred when using other means of determining exposure for the natural color film.

Just as the introduction of the reflected illumination type of photoelectric exposure meter marked a big step in advance for exposure determination, so will the introduction of a correctly designed incident illumination type of meter mark another big step in advance.

In fact, the introduction of this type of meter will probably mean the last big step toward the achievement of a light, portable, easily and quickly operated device that will assure precision control of photographic exposures.

If cinematographers want such a device they must demand it, and they can be assured that meter manufacturers will hear their demand and hasten to fulfill it.

Note: The captions accompanying the two illustrations in Part III of this series (February issue) were interchanged by typographical error. Correctly read, each caption refers to the picture on the opposite page.

Camera Mart Issues Catalogue

The Camera Mart Inc. at 70 West Forty-fifth street, New York, which for the past two years has been under the supervision of Irving Browning, well known still and motion picture cameraman, announces the publication of its first bargain bulletin. This catalog of still and motion picture equipment is sent without cost.

Polishing Up "ARCTIC HOLIDAY"

By
Ormal I. Sprungman

All photos including 16mm. Kodachrome frame enlargements by the writer.

The husky and malamute of the north country provide interesting footage for travel movies.

ALTHOUGH successful moviemakers will tell you that careful planning usually results in better filming, not all travel stuff lends itself to advance treatment, and particularly is this true where initial jaunts are made into new and perhaps strange lands.

When my partner and I shipped north out of Seattle for Eskimo country, we had no idea whether we would be gone two weeks or two years. We wanted to see as much of the northland as we possibly could, yet our plans were quite vague. This complicated our filming, since making a representative film of the country meant holding some footage in reserve to prevent overemphasizing any one locality.

Fortunately, a careful check revealed that the 1200-footer would break nicely into three separate 400-foot reels. The first would cover the boat trip up the Inside Passage. The second reel would feature interior Alaska — the beautiful flower gardens, the huskies and malamutes, large-scale mining, our camping and fishing trips.

The third reel, which we believed would give audiences the biggest thrill, would show our flights over Alaska and our river packet trip up the Yukon.

180 Inches of Rain

Since travelogs seem to furnish their own continuity, editing came easy, although some scenes had to be switched and reswitched to fit the story thread. After the film was in its proper order, titles were worked out, and this took far more time.

A non-believer in label titling, I tried to make every title into a complete sentence expressing a complete thought. This meant consulting travel literature and the pretty folders and books on Alaska to dig out pertinent and interesting facts about the places visited.

Editor's Note: Last month the actual filming of the Alaska-Yukon 16mm. color feature, ARCTIC HOLIDAY, was described. This month the writer covers camera tricks, titling and the addition of sound, voice and music in the final editing.

For instance, some people might be inclined to describe the little coastal town of Ketchikan something like this:

Ketchikan in the rain (or)
Scenes at Ketchikan

These are label titles. They don't explain anything. They add nothing to your storehouse of knowledge. Go a little deeper and find out the average amount of yearly rainfall (the figure will stagger you!), then swing the wording around until it reads:

KETCHIKAN, FIRST PORT OF CALL,
HAS 15 FEET OF RAINFALL YEARLY

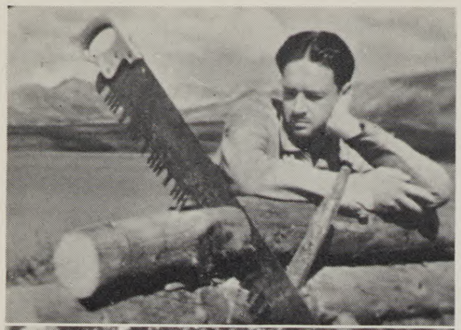
This was followed by a few angle shots of the port taken in the rain, including occasional glimpses of natives and totem poles.

Shore shots taken from shipboard offered excellent opportunities for artistic "framing." Instead of standing right at railing edge and shooting out over a wide expanse of water, the camera was brought back farther on deck to include a portion of the rigging or one of the ventilators along one side of the picture to give the illusion of depth. Similarly, shots were framed throughout the film by utilizing portholes, cabin doors, tree branches, and the wings of planes.

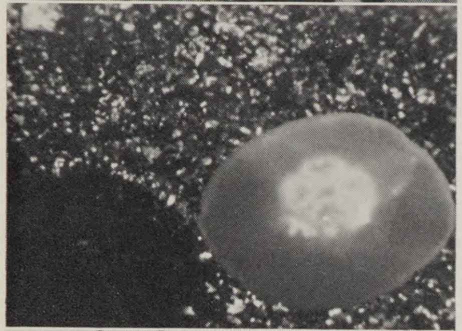
The back-lighted "morning dew" on flowers in an old-timer's garden at Fairbanks was created artificially by first watering them with a sprinkling can, and then shooting in good sunlight. In the dog scenes, filmed on the outskirts of Fairbanks, we coaxed the huskies and malamutes to cock their heads by merely whistling or uttering an odd sound to attract their attention while we filmed.

Camera Saws Wood!

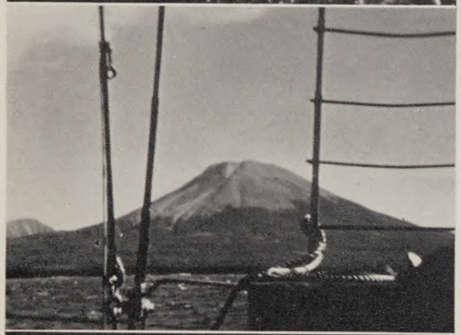
Camped in a log cabin 200 miles in from the coast and with time on our hands, we tried a bit of animation to add a humorous touch. Sawing wood to provide stove fuel for our excursions into the realm of baking became quite a chore.



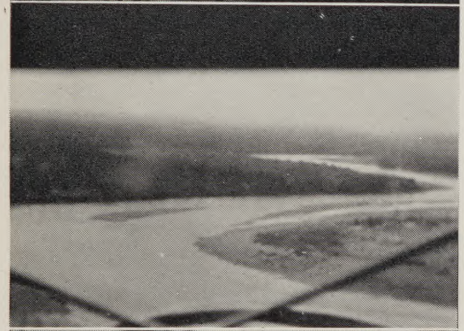
Don Glendenning, Arlington, S. D. sportsman and writer's partner, is shown participating in trick wood-sawing animation stunt. Enlarged from 16mm. color frame.



Striking is the word for this unusual closeup of a jellyfish telephoto-ed under water up the Inside Passage. Enlarged from 16mm. color frame.

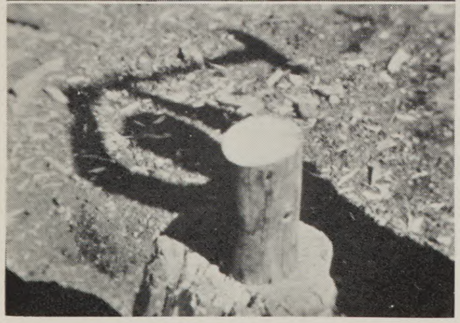


This 16mm. frame enlargement of an Alaskan volcano near Sitka is enhanced by shooting through boat rigging to give scene depth.



The Koyukuk river, north of the Yukon, is shown through the spinning propeller blade. Note heavy mist and low ceiling. Enlarged from 16mm. color frame.

Full moon rising over the Yukon river. Filmed in Kodachrome at f.1.9 through rigging of upstream bound river packet. Enlarged from 16mm. color frame.



Note how close-upping chopping block and including shadow of axe and man adds to effectiveness of shot. Enlarged from 16mm. color frame.

Consequently, in an effort to show how easy woodsawing can become if you know all the tricks, I set the camera on an impromptu tripod, facing our sawhorse.

The scene opens with a shot of my partner sawing away on a log. When he is better than half way through, he stops sawing and lazily leans over the log with hand on head, while the saw continues the cutting motion all by itself until finally the cut log falls to the ground. The sequence never fails to bring an audience chuckle, yet the stunt is simple.

The camera naturally must be mounted on a firm support, for even slight movement will spoil an animation sequence. After the usual introductory footage is shot, and the sawer quits to take his leisurely pose, stop the camera.

The saw will remain fast in the cut groove. Now move the saw up an inch, expose a frame or two, and move it another inch, expose a couple more frames, and continue until the saw has passed up and down two or three times.

When the log is cut almost all the way through, tie a dark thread around its circumference and pull steadily as you film, and the log will fall to the ground. The sawer then rises and prepares to cut off another section in such leisurely fashion.

Shadow Action Unique

In the log-splitting scene, instead of pulling back for a long shot of axe wielder and chopping block, an angle shot was taken looking down on the block. The axe man stands at the right of the cameraman, and the shadow of the upraised axe falls over the chopping block. As the axe descends, the log is split, with the two halves falling to the ground. The shadow action is unique.

For the airplane sequences, the exteriors supposedly showing the plane bobbing in midair, with pilot operating the controls, were actually made on the ground. To give the bumpy air effect, the camera was rocked slightly while filming. Two or three of these very short shots were cut into the air footage taken from inside the plane for a natural effect. To eliminate any ground detail, be sure to shoot up at an angle when close-upping the pilot for the alleged wing shots.

Main title of film discussed in this article. Compare with 16mm. frame enlargement of positive print of identical title, published last month, in which blacks and whites are reversed.

Fitting sound effects and a voice to "Arctic Holiday" was no simple pastime. The musical background came easier, and little experimentation was necessary before it was discovered that the complete Victor Red Seal album of Dvorak's "New World Symphony," played by Leopold Stokowski's boys, was a natural, providing just enough variation to fit the mood.

While screening the film with its new musical accompaniment, I made quick jottings of possible sound effects. The sound disc list ran something like this:

Fanfare
Harbor sounds and whistles
Wind
Train sounds
Birds
Outboard motor
Airplane effects
River boat noises and whistles

The fanfare and outboard motor sound recording was purchased from Standard Radio Sound Effects of Chicago, while the remaining discs fortunately were found in the catalog of the Speedy-Q Sound Effects people at Los Angeles. The river packet sounds came from a Gennett recording.

Some travelogs are photographed, edited and screened without benefit of titles, the exhibitor furnishing a sort of running monologue as it were. This may have its bright spots, but the writer's personal observation has been that audiences experience difficulty listening to as well as watching a presentation other than the sound movie.

Adding Voice

Quite often, the movie sequence is too short for the lecturer's lengthy verbal accompaniment, which runs over into succeeding scenes and causes confusion.

Titles, on the other hand, are designed

to explain things not brought out in the film itself, and they have a conciseness rarely found in ordinary commentaries. They provide the finishing touch to a well filmed movie.

Shortly after the film was ready for screening, D. T. Thomassian, disc recording pioneer of Minneapolis, escorted me through his studio, and before I left I was convinced that a voice recording might add a novel supplement to a titled and edited film, already synchronized with sound and music.

Such a disc would not replace the titles which were cut into position. Instead it would bolster them by providing additional information for audience enlightenment.

Rather than make a continuous recording, 13 separate "cuts" were recorded on each side of the acetate disc, with cuts on Sides A and B numbered for quick identification in scoring.

Thus, when an Indian youngster is shown holding a gold pan full of giant nuggets, the dual turntable system picks up the appropriate cut (B-6), and the audience discovers:

> Here are a few nuggets that passed through the sluice box and wound up in the tailings. Don't look now, but that portable gold mine in the center is worth just one thousand dollars!

Following a totem pole title and a few long and medium shots of odd carvings, succeeding scenes are shortened by the verbal commentary recorded on Cut A-2:

> Nightmare of the Northlands, the totem pole grins down on many an Alaskan city. Here we find three types of totems: the genealogical, which is really the family tree; the historical, which commemorates some great event; and the mortuary, wooden epitaph of the snow country Indian. Less than a century old, many of these totems were shaped with white man's tools, and colored—believe it or not—with white man's paint.

Special precautions are taken of course to make sure that no title appears on the screen while a cut is being played.

Even a sound effect was dubbed with the voice in one cut describing the steamer as it rides up to the face of Columbia Glacier:

> Icebergs scrape the bow of our steamer as we drift slowly toward the glacier wall. Once within range, the engines idle while the skipper blows his whistle (whistling sound effect). If nothing happens, he blows again (repeat whistle). Suddenly, the face of the glacier cracks, and tons of ice hit the water with a terrific roar (fake roaring sound).

The roar was produced by blowing the breath across the face of the microphone. If the cut is started at the proper scene in the film, the roar actually will occur when the icy cliff starts an avalanche.

If voice, sound disc and music were rerecorded on a single disc, this would necessitate extremely close synchronization during projection, even altering the speed of the projector from time to time to keep apace of the recording. With dual turntables, however, the musical background can be playing through one pickup, while the other is handling the sound and voice.

Furthermore, the properly recorded voice is far superior to ordinary ad libbing with a microphone during the presentation, for the canned voice is always consistent, with no bad breaks or weary pauses.

Inspiration for the hand-lettering, airbrushed main title for "Arctic Holiday" came from the midget steamer pictured on the folder found in the Kodachrome film carton, while the northern light background was suggested by a sketch in a travel folder. The two ideas were combined by an artist at Sly-Fox Films of Minneapolis to produce an interesting and original title to order.

By analyzing the abbreviated style used by the nation's leading announcers in introducing topnotch radio programs, I managed to pick up a few pointers for a send-off on my own film. As the theater lights grow dim, the fanfare blasts out its own little piece, followed immediately by:

> Good evening, everyone! From the attic of the world, from up there in the North Country where the summer sun forgets to set, we present the highlights of a 10,000-mile trip into Alaska and the Yukon—by land, by water, by air!

Then the main title fades in on the scene, the background music increases to proper volume, and "Arctic Holiday" is off again on another one of its sprocket-hopping jaunts.

Los Angeles 8mm. Club

The February meeting of the Los Angeles 8mm. Club was held at the Bell & Howell Auditorium. President William Wade announced the new policy of the club in connection with technical meetings. The meetings, if held, will feature the technical phase of amateur movie production, together with demonstrations and speakers who will be specialists in their respective fields. Questionaires were passed out to determine the members reaction to such meetings and from all indications everyone was in favor of the additional activity.

Plans are being formulated for the Los Angeles 8mm. Club broadcast over Radio KECA as a feature of the "Studio Darkroom Program," conducted by Art Brearley.

The feature of the evening was the five reel 8mm. picture "Checking Off the Budget," produced by Bruce Johnson.

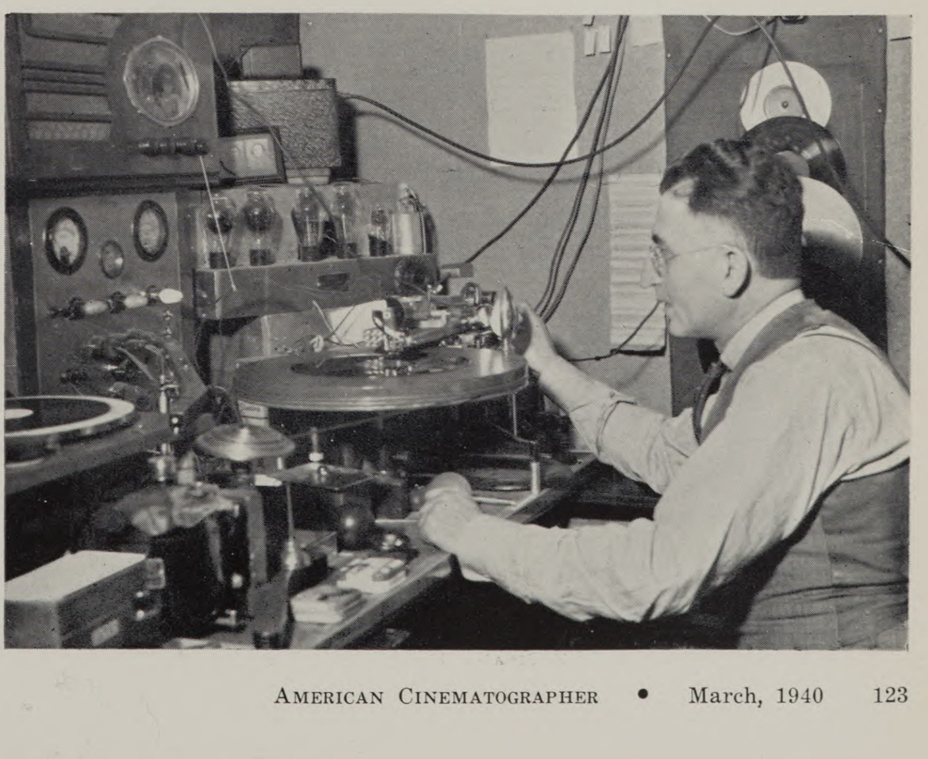
The remainder of the evening was devoted to the screening of a vacation picture, "Alaska Vacation," produced by George Johnson.

LEO CALOIA, Secretary.

New B & H 8mm. Lens

Bell & Howell announces a new, superfine projection lens, said to be ideal for difficult projection conditions, is available for the Filmo-Master 8mm. Projector. This lens is described as particularly useful when projecting unusually large pictures, when screening during daylight hours in a room which cannot be darkened completely, etc.

The new lens is a well-corrected, 1-inch, f.1.6 anastigmat, and will produce excellent detail over the entire picture area. It may be employed in all Filmo 8 projectors now in use.



D. T. Thomassian, Minneapolis disc recording pioneer, is seen cutting the acetate disc used by the writer to provide verbal commentary for "Arctic Holiday." Separate cuts were made as portions of the script were read through a microphone located out of camera range.

PHILADELPHIA CINEMA HAS RARE 4TH ANNUAL

By B. N. LEVENE
Chairman of Publications Committee

To highlight a program, particularly a banquet with a principal speaker, is usually a fine accomplishment. The PHILADELPHIA CINEMA CLUB outdid itself, and highlighted two speakers at the fourth annual banquet, held February 20th in the famous Rose Room of McCallister's in Philadelphia.

E. P. Coffey, chief of the Technical Laboratory of the Federal Bureau of Investigation came up from Washington to tell us about "Scientific Crime Detection Photographically Applied."

It was interesting to note from Mr. Coffey's address that where in the ordinary realms of commercial and amateur photography we do everything we can to produce a result that is most pleasing to the eye and disguise and hide physical blemishes, photography from the police standpoint is a cold proposition; highlighting to produce and show off to advantage every physical defect, contour, deformity, change, or out of the ordinary condition that might exist in the subject being photographed.

Again from a commercial or amateur standpoint, where the view of a person is usually termed "portrait" in the parlance of the FBI it is a "Mug."

Crime Detection

Inspector Coffey brought out in his talk how the use of photographic equipment can be employed to detect the criminal, even in the act of committing a crime. He cited the example of the camera hidden in the box offices of motion picture theatres, which are usually surrounded with quite an array of light.

In the event there is a hold-up all the cashier has to do, while passing out the money, is press her foot on the button, thus tripping the mechanism and taking a complete photograph of the scene of the crime while it is being committed.

Dealing on quite a different phase of photography was the address of Harry Goldberg, director of theater advertising and publicity of Warner Brothers. Circuit Management Corporation, who came down from New York to talk to us on the subject that "Audiences—Not Producers—Make Pictures."

Audiences Make 'Em

Although speaking before us as an amateur group, Mr. Goldberg recognized that the amateur is interested in professional movies, probably to a greater extent than just the average moviegoer.

Sensing this keep inner interest, the speaker went into details to explain why certain types of pictures are made, while others after being made never see the light of day.

He explained the trends in certain types of pictures, and set up the points on which the producers attempt to visualize the acceptance of a certain type of picture. He conceded, for that matter, the producers or the distributors are not able actually to gauge the public's reaction to any particular style or type of picture, including Shakespearean productions.

He brought out the fact that it is the public's reaction at the box office which determines the style of pictures that the producers will make to please the public, but also brought out that the producers have no way of telling what the people want unless they submit something for approval at the box office, and after explaining at great length he came right back to his starting point, namely that "Audiences—Not Producers—Make Pictures."

Through the cooperation of the local trade, handling amateur movie products, the Philadelphia Cinema Club was able to offer a group of 31 door prizes, to the approximate 300 assembled members and guests. There was a 10 to 1 shot of securing a prize—and a great deal of fun at the same time.

E. P. Coffey, chief of the Technical Laboratory, Federal Bureau of Investigation, United States Department of Justice, who spoke at dinner of Philadelphia Cinema Club.

Having among our membership a cartoonist extraordinary the use of "Mike" Angelo's services were employed as a mirth provoking portion of the program.

No banquet of the Philadelphia Cinema Club would of course be complete without the showing of prize films. The winners of the first and second prizes in the January contest of the Philadelphia Cinema Club, namely "Tally-Ho" by A. L. Rasch and "Bermuda" by Neil L. MacMorris, both of which were 16mm., al lcolor, 400 feet reels, synchronized with music and sound effects, brought this never to be forgotten banquet to a conclusion.

Metropolitan Ciné Club

With the recent election and ballot counting past, the officers of the Metropolitan Ciné Club of St. Paul, headed by a prominent St. Paul attorney, Earl M. Waldorf, the twelve-month-old brain child of Gilbert Peterson has grown to include some forty of the most enthusiastic "shooting if not talking" amateur moviemakers and has become the envy of all of its kindred organizations.

Old Boreas Rex VI realm certainly afforded many an enviable "shooting ground," and it is the writer's opinion that, judging from the already developed film of the recent carnival, the major film and news reel companies could well be proud to be the possessors of it.

Leo Zengerle, Metropolitan Ciné Club's general chairman, was appointed by His Majesty Boreas VI officially to film all of the high spots of this year's carnival.

Metropolitan Ciné Club has made plans to present to the public February 28, at the Angus Hotel, an equipment show covering all of the articles used by the beginner and the most expert amateur photographer. It will be an excellent opportunity for prospective purchasers to compare 16mm. and 8mm. movie-making equipment. Many of the Twin City photographic supply houses will exhibit and have cooperated by circularizing five thousand persons on their mailing lists.

Cinema Club of San Francisco

At the regular monthly meeting of the Cinema Club of San Francisco, February 20, Club Member Walter Terry showed a sound picture produced for the Great Northern Railroad. This film consisted of several short subjects namely "The North Circle Trip," "Gun Sight" and "Fishing in Glacier National Park." In addition to this film, Mr. Terry screened a picture produced by himself called "Streamlined Baking Methods of Today."

This is a documentary taken of Mr. Terry's bakery. It has been shown before a number of different groups and has received very fine comment from each one.

Professional Projectionists Conducting Amateur Contest

By PAUL R. CRAMER

FOR SOME TIME the organized projectionists of Southern California have been informally discussing the feasibility of conducting an amateur photographic contest entirely restricted to the membership. A meeting was held February 15, at which plans were formulated for the holding of the preliminary exhibitions and the final salon.

The title selected for the organization was the Southern California Projectionists' Amateur Camera Club.

There will be seven monthly showings, from April to October inclusive, and a salon will be held in November, the exact date and place of exhibition being determined later.

The men who are behind these showings are those who operate professionally all the projection machines in the studios and the theatres from Bakersfield to San Diego. They are the men who stand behind the projectors in theatres of the small towns and behind the projectors of the great theatres like, for instance, in Los Angeles the Carthay, Warner Brothers Hollywood and downtown, Chinese, and all the others.

Committee Members

They are the men who in Southern California the same as throughout the country are affiliated with the I.A.T.S.E. The membership in the Southern California locals alone runs into many hundreds. Perhaps the majority of these men are employed at night and for certain hours in the daytime are free. That free time is to rather a large degree devoted to amateur photography, in the aggregate to an amazing degree.

The informal meeting on February 15 was made up of studio projectionists, as a matter of convenience. Later when plans are more fully formulated there will be another meeting at which time the membership will be made more fully representative of the men interested in such places as Bakersfield, Santa Barbara, Ventura, Hollywood, Los Angeles, Long Beach, Santa Ana, San Bernardino, San Diego, and many other cities and towns.

The present Governing Committee was selected as follows: Paul R. Cramer, projectionist at the Van Nuys Theatre of Van Nuys, chairman; Merle Chamberlin, chief projectionist, M.G.M. studio; Howard Edgar, chief projectionist Columbia studio; Lee Moore, president M.G.M. studio camera club; Fred Borch, Local 150; Jim Brigham, Paramount studio; John Smith, Twentieth Century-Fox studio; and George Mariot, RKO-Radio studio.

This department will be conducted with articles that will appeal to two divisions of readers. One of these, as said, will be matter that will appeal to the projectionists of the theatres and studios of Southern California. That matter will be amateur photography.

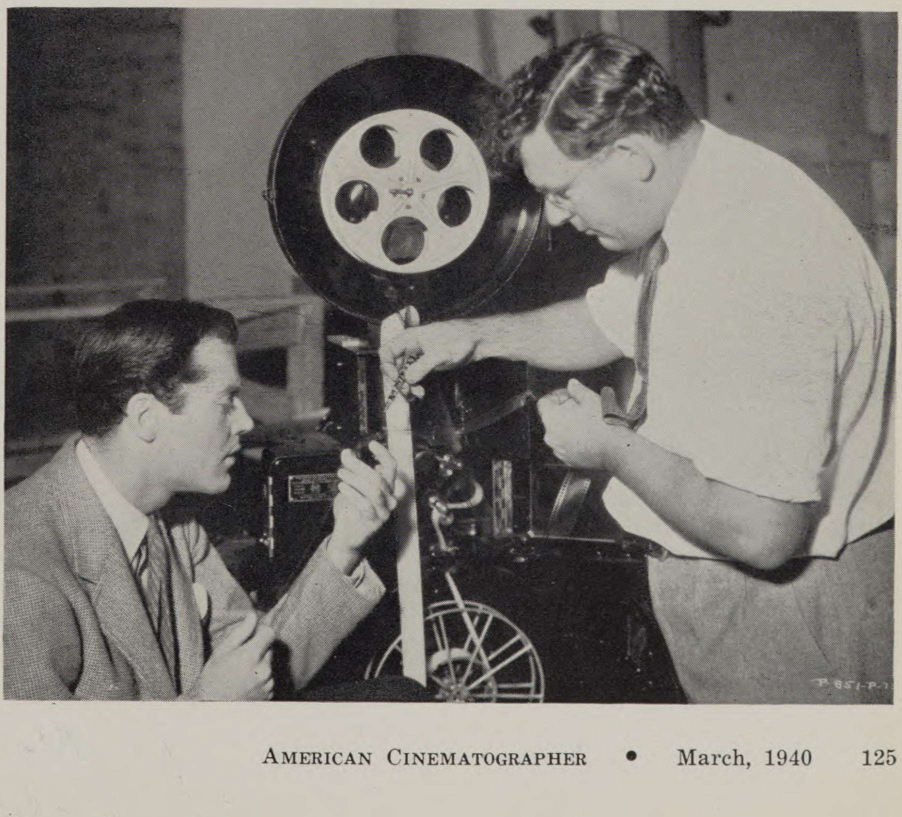
There will be a second department. That will be to amateur photographers and also, perhaps strangely enough, to professional photographers. For it is assumed that the professional photographer may not necessarily be so qualified as a professional projectionist that he may approach an amateur projection machine as to the "manner" born. It will be a department for amateur projectionists written by a professional projectionist.

There are many advanced amateur projectionists who sometimes get "stuck" on seemingly a simple matter of projection, but when they come to take the machine apart to discover what really makes it tick they find themselves stumped.

Classifications

Particularly is this true in these rapidly approaching days of sound. To those amateur readers of this magazine who have questions to ask relating to projection either silent or sound this department stands ready to attack those questions in the issue succeeding that in which the question is received.

Also there will be articles describing



Paul R. Cramer, at right, explaining to Henry Fonda some of the intricacies of sound on film at RKO-Radio studio.

PAUL R. CRAMER

PAUL R. CRAMER, professional projectionist, chairman of the governing committee of the Southern California Projectionists' Amateur Camera Club, is well qualified for his position. In the thirty years since his school days, when he officiated as janitor, assistant doorman, assistant cashier and relief operator, or projectionist as they have come to be known, of a primitive Main street theatre, he has gone through the mill.

On his return from service in France he was engaged as an assistant cameraman, working with Arthur L. Todd, A.S.C.; Glen MacWilliams, A.S.C.; and Tony Gaudio, A.S.C., and later at the Sanborn Laboratories in Culver City. At the coming of sound he was employed by the Alhambra Theatre, in South Hill street, Los Angeles, one of the first houses to install sound equipment. Since then he has worked steadily at projection, one of the houses in which he has been employed being the Carthay Circle, where are shown the biggest there are.

In the articles that are to come Cramer gives the benefit of the knowledge he has gained in thirty years in the motion picture industry. In addition to talking about the Southern California Projectionists he will answer any questions that may be put to him by amateurs regarding their 8mm. or 16mm. projectors.

the various projectors and the best way of caring for them, of treating them to get from them the best sort of work.

Finalist Class—Constitutes those who have won over 250 points in the following classes:

A Class—A Class consists of those who do all of their own work and whose work is classed above the average (amateur).

B Class—B Class is the average amateur photographer whose work cannot be classed as exceptional.

C Class or novice—C Class is the novice who takes the picture with the camera, but does not do his developing or printing. This classification is permanent.

After the first showing 230 points will be necessary to pass from one classification to another.

The person sending in the pictures will name the class he desires his work to start in, and the judges will determine whether his work will rate an advancement from that class or not.

The projectionists employed in the studios will NOT be allowed to use studio lighting or sets. In short, all pictures entered in this contest must be shot off the lot.

List of technical data will be mailed to the contestant upon receipt of request and stamped and addressed envelop for answer.

Prints must not be less than 5 by 7 inches and submitted on glossy paper.

Advancements of prints for final judging will be under the point system. (1) For one first, 100 points. (2) For one second, 50 points. (3) For one third, 30 points. (4) Honorable mention, 25 points. Popular award, 50 points.

All prints must be in black and white. No tones or color will be judged.

Each contestant will be allowed two prints for each monthly showing. These prints can be of any size, but must be on a standard 16 by 20 inch mounting. Pictures must have been shot during the year of 1940 and accompanying each picture must be the technical data including date shot and the local number of the member. And the prints must be in the hands of Paul R. Cramer, at the American Cinematographer, 1782 North Orange Drive, Hollywood, not later than the tenth of the month preceding the showing.

First showing will be April 10 to 20, action pictures only; second, May 10 to 20, children; third, June 10 to 20, table tops and still life; fourth, July 10 to 20, portraits, formal, informal and character; fifth, August 10 to 20, marine; sixth, September 10 to 20, nudes or semi-nude (be sure and have publishing and exhibiting release glued to the back of the print with model's signature); seventh, October 10 to 20, landscaping.

Final Salon Showings

The final salon showing of the winner and runner up of each monthly showing will be held November 18 to 30, 1940, at a location to be designated later by the committee.

The final salon and showing held in November will be judged by Hurrell, internationally known portrait photographer; Ernie Backrach, ace still photographer at R.K.O. Radio studio and nationally known authority on photography; Ray Jones, ace photographer Universal studio and nationally known authority on photography; John Nickolaus, head of the M.G.M. laboratory and an internationally known authority on all subjects pertaining to photography; Al Shaefer, ace stillman at Columbia Studio, who recently has won honors in notable competitions.

General information to member contestants regarding the awarding of prizes, shipment of pictures and names of the judges, include the following: Send all prints to Paul R. Cramer, at American Cinematographer, 1782 North Orange Drive, Hollywood, prepaid, who will not be responsible for the condition of prints received. Assurance is given every precaution and care will be taken to safeguard all prints sent. All prints may be sent through the American express company in containers made for that purpose. Be sure and include all technical data concerning your prints on the placard that will be mailed to you along with your entrance blank. There is no entrance fee, or fee of any description necessary from the contestant. All prints will be shipped back to the mailer in the same container that it was received in and they will be shipped back c.o.d.

At each showing there will be a first, second and third prize, four honorable mention plaques and one popular award in each of the four classes.

The Photographs

On the opposite page are photographs by Howard Edgar of the Columbia Studio, showing his versatility with the use of his Argus mini camera. Before we get too deep into the description of these photos, it is necessary to explain one of the major contributing factors of Edgar's ability to portray Mother Nature so superbly. That is his ability to make his own lenses.

First take a good look at the photo entitled "Afternoon of a Fawn." This picture was shot on Background X film, 35mm. at 1/300 of a second at f.8, no filter, with a bright and clear sky, midsummer.

Projectionist Lensmaker

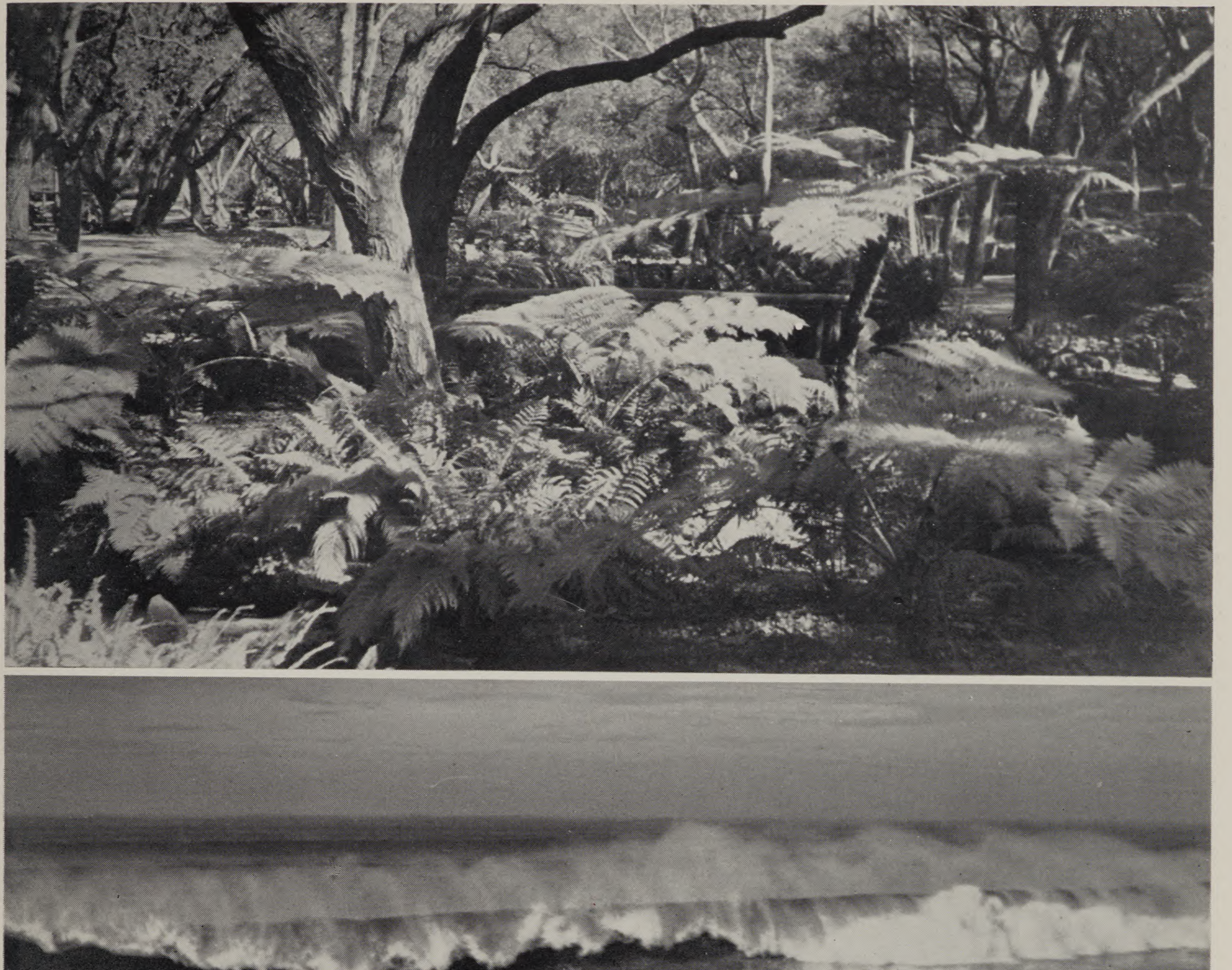
The most amazing thing about this photograph is the lens—a 7-inch lens, 5-glass combination, ground and assembled in its entirety by its photographer. We also understand that he has gone in for "Objective Lenses." One has arrived at this writing, it is reported, but a full description of it will appear later.

The photograph entitled "Alley Oop" is with the same lens, same speed, same film except that it was shot one hour later. The estimated speed of the subject was 40 miles per hour, riding as you see just ahead of the incoming wave and at the peak of its speed.

"Frilly Lace" is one of those ever-changing moods of Mother Nature that is so seldom recorded by the hand of man. The attempt of a boisterous offshore wind to drive back the might of the sea caused a phenomenon that was caught by the ever-ready camera of Edgar. This shot is the result of a masterpiece of timing, plus a lightning like ability to grasp a situation and a knowledge of what to do instantaneously.

This picture was shot on 35mm. plus X film at 1/300 of a second at f.8, using a red filter, taken at 10:30 a.m. Christmas morning with his Argus camera. The weather was cloudy with the sun breaking through in spots. This was shot with another lens, or 75mm., ground and assembled by Edgar.

Now, to prove to you members that the photographer has more than the luck of the candid camera toter, we turn from



Examples of photographic work of Howard Edgar, chief projectionist at Columbia Studio. The upper one is "Fern Dell," near the Western avenue entrance to Griffith Park, Los Angeles; "Frilly Lace," center, is a picture of the surf—and aptly named. At the right in circle is "Afternoon of a Fawn" and at the left is "Alley Oop."

that type of photography, that requires snap judgment, to the other type, that requires patience, and a thorough knowledge of composition as well as of lights and shadows.

In the picture "Fern Dell" we find all those inherent qualities that are necessary requisites of the photographic masterpiece. This picture was shot on Plus X 35mm. film at 1/25 of a second at f.16, using an Aero 2 filter with the Argus camera and 50mm. lens with a good light, as you may see, in early spring. The working depth of this lens is quite apparent at first glance, as well as the lack of grain, one of the bugaboos of this type of photography.

From 70 to 80 minutes was required for the developing of this negative at an average temperature of 65 degrees F. and this enlargement was straight, with no attempts to block out the highlights or soften the shadow lines.

This picture, I can assure you, will be a high mark to shoot at, but time will tell when the other photographs are turned in from contributing amateurs in our Southern California territory.

MOVIEMAKERS ADVISED ON WAYS OF PROJECTOR

By PAUL R. CRAMER

THE AMATEUR motion picture photographer spends from $15 to $1000 or more on his equipment. This he will use for photographing the scenes or tableaus for the family histories, which are later invaluable as a record of the activities of the baby, possibly now attending college, getting married or maybe by now the proud parent of his or her own child.

This amateur will spend hours in his darkroom trying out new film or developers. Possibly he has some titles to shoot, now and then some backgrounds, but sooner or later in his career as an amateur photographer he will end up with a super super colossal masterpiece of the family at play, at work, up a tree, at the beach, etc.

At last the day arrives, the masterpiece is finished and ready for its world premier. He sends invitations to friends and relatives, just the select ones that sent a card last Christmas. Now the audience is seated, our hero turns off the house lights, snaps on the projector switch and they're off.

The main title appears "Hmmm, that's odd," he says. "I'm sure that title was in focus when I shot it."

He tries to focus it while the title is running. No luck. So the show is stopped the lens taken out and cleaned, and the show is started all over again.

Still out of focus, and, what is worse, the picture is all cloudy in the center, and is jumping just enough to be annoying, so the world premier ends with the small but by now unfriendly audience making unnecessary criticisms about the photography and the picture in general.

Projection the Ultimate

Moral; The $15 or $1000 camera equipment is only as good as the projection equipment that is used to reproduce the picture on a screen for you and your friends to see.

To begin with, let's analyze the various components that make a good home movie projection set-up.

First, and most important, of course, there is the projector. On the market today there are several makes ranging in price from just a few dollars to machines costing over a thousand. As in most equipment today, you will get what you pay for.

Right away let's determine the limitations of our particular projector. If it is a machine that costs only a few dollars it is unreasonable to suppose that it is designed for auditorium use. The lamp, optical system, and in short the entire projector must be constructed inexpensively.

Therefore, we have our first restriction—limited power, which means that the size of our projected image must be strictly limited. It is much better to project a film on a very small screen than it is to use a large screen and have a resulting loss in the quality of the projected picture.

By "quality" we mean of course "clarity, brilliance and sharpness." Briefly, never try to make a 100-watt projector do the work of a 400, 750 or 1000-watt machine.

If your projector is capable of projecting large images, by all means use the largest screen that is practical to use in the room in which you are projecting. All this would seem to be an unnecessary dissertation on what must be obvious to even the most amateurish amateur.

Screen Too Large

Yet how many times have you sat down to enjoy home movies that are spoiled by being projected on a screen so large that the picture quality is ruined—or on a screen so small that the intense light hurt your eyes?

Lenses having a focal length of one inch are standard on all 8mm. projectors and 2 inch lenses are standard on all 16mm. equipment. Lenses of various lengths are available for use on the more expensive equipment, but it is suggested that the most satisfactory lens is perhaps the lens with which your projector was originally equipped. Inasmuch as the size of the picture is dependent on the distance between the projector and the screen, unless a lens of other focal length than standard is used, you are apt to find that the most pleasing screen area will be obtained by using the standard lens. That is why, of course, these particular lenses have been chosen as the manufacturers standards.

Following you will find a table for both 8mm. and 16mm. lenses and screens. These tables are the results of research by the larger manufacturers. This particular set was supplied by Mr. Weed of the Bell and Howell Company. This is the first publication of it, and in the next issue we will go into the construction of the projection lens.

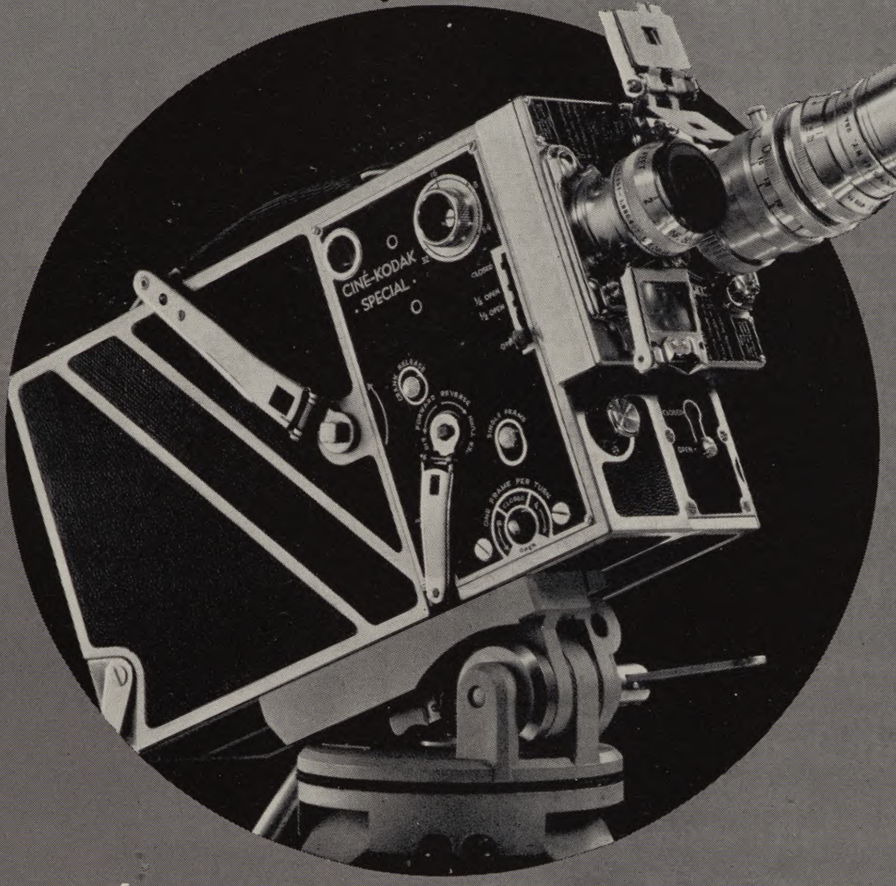
Table of 16mm. Projected Picture Sizes

Focal Length of Lens	Distance in Feet from Screen															
	8′	10′	12′	16′	20′	25′	32′	36′	40′	45′	50′	64′	75′	100′	125′	150′
	Width of Picture															
⅝″	4′10″	6′0″	7′2″	9′7″	12′0″	......	......	......	......	......	......	......	......	......	......	......
¾″	4′0″	5′0″	6′0″	8′0″	10′0″	12′6″	......	......	......	......	......	......	......	......	......	......
1″	3′0″	3′9″	4′6″	6′0″	7′6″	9′4″	11′11″	13′5″	14′11″	......	......	......	......	......	......	......
1½″	2′0″	2′6″	3′0″	4′0″	5′0″	6′3″	8′0″	9′0″	10′0″	11′3″	12′6″	......	......	......	......	......
2″	1′6″	1′10″	2′3″	3′0″	3′9″	4′8″	6′0″	6′9″	7′5″	8′5″	9′4″	11′11″	14′0″	18′9″	23′5″	28′1″
2½″	1′2″	1′6″	1′9″	2′4″	3′0″	3′9″	4′9″	5′4″	6′0″	6′9″	7′6″	9′7″	11′3″	15′0″	19′8″	22′5″
3″	......	1′3″	1′6″	2′0″	2′6″	3′1″	4′0″	4′6″	5′0″	5′7″	6′3″	8′0″	9′4″	12′6″	15′7″	18′8″
3½″	......	1′0″	1′3″	1′8″	2′1″	2′8″	3′5″	3′10″	4′3″	4′9″	5′4″	6′11″	8′0″	10′8″	13′4″	16′0″
″	......	......	1′1″	1′6″	1′10″	2′4″	3′0″	3′3″	3′9″	4′2″	4′8″	6′0″	7′0″	9′4″	11′8″	14′0″

Projected 8mm. Picture Sizes

Lens Focal Length	Distance in Feet from Screen								
	8′	10′	12′	16′	20′	25′	32′	36′	40′
	Width of Picture								
¾″	2′0″	2′6″	3′0″	4′0″	5′0″	6′3″	8′0″	9′0″	10′0″
1″	1′6″	1′10″	2′3″	3′0″	3′9″	4′8″	6′0″	6′9″	7′5″
1½″	—	1′3″	1′6″	2′0″	2′6″	3′1″	4′0″	4′6″	5′0″

It Really is Special



CINÉ-KODAK SPECIAL

IT'S a superb 16 mm. motion picture camera, of course. But the quality that sets Ciné-Kodak Special apart is the fact that it is truly special, in every sense of the word.

Designed by men with specialized experience in cinematography and built in a special shop devoted exclusively to work of the highest precision, Ciné-Kodak Special is the logical camera not only for advanced 16 mm. cinematographers, but also for specialists in such fields as medicine, biology, physics, engineering, athletics, and drama.

A copy of the book, "The Story of the World's Finest 16 mm. Movie Camera," may be obtained, free, from your dealer or direct from Rochester.

Some of the features of Ciné-Kodak Special, basic model: adjustable shutter opening . . . variable camera speeds, 8 to 64 frames per second . . . reflex finder, functioning with all lenses . . . interchangeable film chambers (200-ft. chambers available as extras) . . . capacity for fades, dissolves, mask shots, animations, and many other "professional" effects . . . may be fitted with eight instantly interchangeable accessory lenses, ranging from a 15 mm. *f*/2.7 wide angle to a 6-inch *f*/4.5 telephoto lens, each with its own front view finder element . . . regularly equipped with the Kodak Anastigmat 25 mm. *f*/1.9 lens . . . film footage meters on both mechanism and film chamber . . . frame counter . . . masks for double and multiple exposures.

Accessories Extend Usefulness

Among the many accessories available are several types of electric motor drive . . . optical finder . . . reflex finder image magnifier . . . lens extension tubes for semi-microscopic work . . . electric time lapse outfit for studies involving single frame exposures at fixed intervals, from ¼ second to 24 hours. The price of the basic model is $417.50.

EASTMAN KODAK COMPANY, ROCHESTER, N. Y.

MAKING ALL-PURPOSE EFFECT BOX IN HOME WORKSHOP

By ROBERT W. TEOREY

AS the average cinematographer advances in knowledge regarding his hobby his thoughts often stray toward cinematic effects and the various methods to use in procuring shots not ordinarily possible in straight filming.

The general run of cine cameras are built with only one principle, and that is the action of moving film through a gate at the rear of the lens at the rate of 16 frames per second. Obviously then, fading effects, masked shots and ultra closeups require external application of devices with which to procure these effects.

Soon our home workshops are in production as we commence building appliances for effect work. This, in spite of the fact that many devices embodying the desired features may be purchased from most camera dealers.

Usually we build our own because prices are somewhat prohibitive, but generally because the enthusiast gets his really genuine thrill from building an effect device and glorying in his versatility as evidenced on his home movie screen. At least the latter is true in my case.

Once the bug is instilled within us for a variety in the shots making up our cinematic fare, the urge to produce them shortly has our imagination and ingenuity worked up to the proper pitch to go to work and gradually we have an accumulation of gadgets to serve all purposes. With me, this got to the point where my devices overflowed my camera case to the exclusion of the camera.

Building the Limit

Thus was born the idea to build a contraption that would be my supreme effort for versatility and compactness, yet having provision for every feature I could think of.

Eventually my labors brought forth the camera attachment depicted in Fig. 1. In my mind, this is a combination effect box, sunshade, filter and fading glass holder.

In addition, it has provision for mounting a range finder and a still camera view finder for parallax correction, the latter being extremely useful in closeup shooting where normally it is necessary to guess at the allowance to be made for correction with the normal view finder.

Another feature worthy of mention is the easy attachment of an extension arm mounting an easel for use as a titler (Fig. 2). This extension is telescopic allowing titles to be photographed at distances of 8, 10 and 12 inches which permits the use of typewritten titles as well as larger hand lettered ones.

The easel is slightly larger than the area normally filmed at 12 inches; for the shorter distances, area masks of black cardboard may be slipped in place and held in position by spring clips bolted to the easel.

Naturally, when shooting at these short distances auxiliary lenses are required and these are slipped into the slot of the upright directly in front of the camera lens.

Easy Closeup

Another use this titler may be called upon to perform is as a framer for ultra closeups such as flowers, bugs and the like. Simply center the subject within the confines of the easel and press the starting button. As easy as that!

The basic material used in the construction of the effect box is plywood. The metal trim is of sheet aluminum while the bellows originally served as an integral part of an old 2¼ by 3¼ still camera.

A metal rod and fittings from an old table lamp serve as the mountings for the standards holding the bellows. Naturally a few screws and some wood glue play their respective roles in holding the device together.

The construction of my composite gadget started with the base. This is exactly the width of the camera and extends about 4 inches to the front of the lens. A hole drilled in this piece is countersunk to take a flat-headed bolt which secures the camera in place.

Another hole in the base has a nut countersunk in it to serve as a tripod socket. For positive alignment of the camera each time it is mounted, a guide strip of sheet aluminum is fastened to the side of the base (Fig. 1).

Two short uprights of plywood hold the metal rod to which the two taller elements holding the bellows is secured. This construction is used primarily to allow the rear element to be moved forward on the rod and away from the lens for several reasons.

First, with the upright moved forward, it is much easier to set the diaphragm of the lens; secondly, when winding back by film, the camera lens must be capped and in order to do so the lens barrel has to be cleared of this obstruction. Capping the lens is almost an automatic feature with this arrangement. The lens cap is mounted to the rear upright by means of a short arm and when not in use it reposes in a position below the lens.

Automatic—Almost

To cap the lens, the standard is moved forward, the cap is rotated on its arm to where it is stopped in position by means of a short pin. Moving the upright toward the lens then allows the cap to slip in place on the lens barrel. At least, it is almost automatic!

The next use for the movable piece is in positioning the parallax viewfinder (Fig. 3). This is the finder that formerly kept company with the bellows on the still camera. It is masked only to permit viewing of an area normally filmed with the standard lens on the camera and is fastened by means of a short aluminum arm to the movable piece.

When being used, the finder is rotated into place centering directly in front of the camera lens (Fig. 3). The real value of this finder is in shooting closeups where the normal viewfinder demands various degrees of compensation. After the subject is framed, the finder is moved out of the way of the lens and the standard is then returned to the filming position.

Naturally the movement of the rear element depends upon the flexibility of the bellows for the operation would be impossible or at best complicated if a firm material were used for the matte box.

In addition to the uses cited, this up-

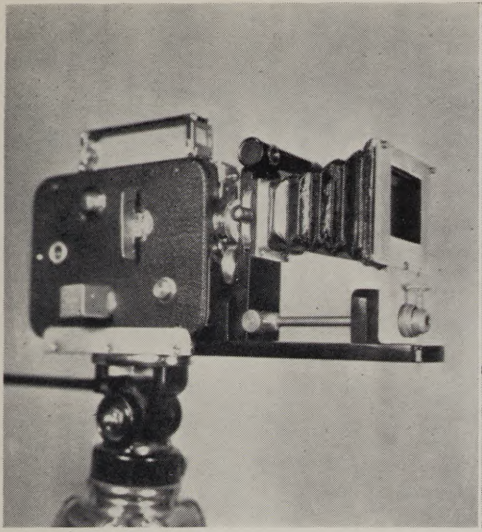


Figure 1—Camera and effect box ready for filming.

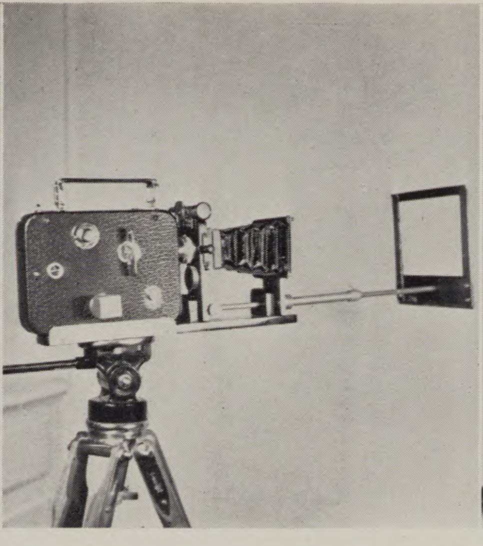


Figure 2—Titler extension fitted to front of effect box.

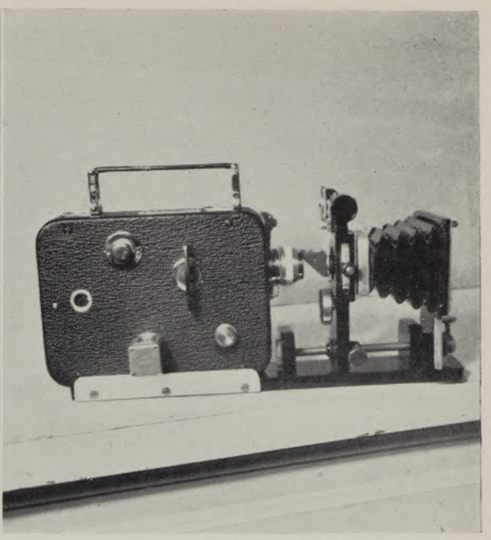


Figure 3—Parallax viewfinder in place in front of camera lens.

right serves to hold a range finder and a filter holder (Fig. 1). The latter is inserted in a slot located immediately in front of the camera lens. By removing the holder, a fading glass or supplementary lens may be slipped into place.

The front section of the effect box is of plywood faced with aluminum (Fig. 4). The plywood is slotted from the sides for insertion of effect masks which are held in position by the metal facing.

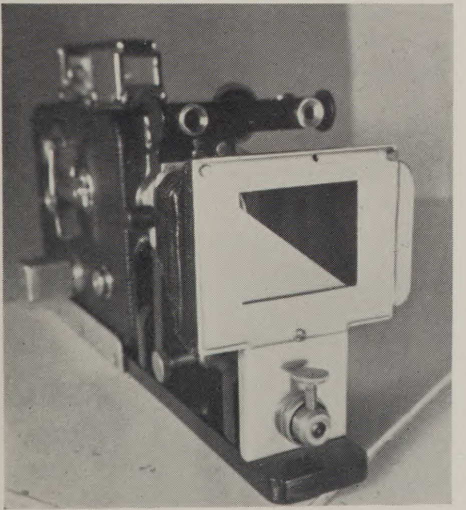
Masks are made from sheet aluminum and are cut to fit snugly in the slotted space. The lens side of each mask is painted a dull black to prohibit chance light reflections.

Producing Various Effects

Various masks may be made for outlining scenes in straight shooting, such as binocular, keyhole, oval or circle or whatever is desired, all depending upon the demand for a certain effect.

For multiple exposure or composite shots, quarter masks, half masks and diagonals help produce varied effects. For this type of work a back wind on the camera is helpful, but an old practice of running the film through the camera a second time for repeated exposures can be used.

Figure 4—Matte box fitted with a diagonal mask.



When making split field effects, two separate or matching masks are necessary for accuracy. Two half masks are fitted in the matte box until both edges meet in the center of the box. The subject may then be framed in the finder in the right of the field. The mask on the right is removed and the exposure is made.

The film is then wound back to the beginning of the scene; the subject moves to the left of the field, the right mask is then carefully fitted in place, after which the other segment is slipped out and the second exposure is made.

The result shown on the screen will present your subject conversing with himself with not the slightest indication of a split scene to spoil the illusion. With this type of shot, a backwind on the camera is essential as it must not be moved until both sides of the scene have been exposed.

To facilitate in framing masked scenes, a piece of celluloid is fitted in the front segment of the regular viewfinder. This is scored through the center both vertically and horizontally as well as diagonally. Thus the unmasked section to be photographed may be quickly lined up in the finder without undue difficulty.

Title Extension

The title extension (Fig. 2) consists of a tube and rod to which an easel made of more of the sheet aluminum is attached. The tube is fitted in place near the foot of the forward section of the matte box and is held rigidly in place with a set screw.

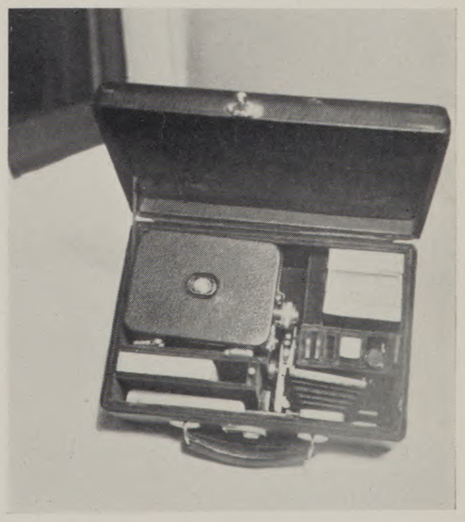
Then by means of the thumbscrew at the other end of the tube the rod may be firmly fixed at the particular distance required for the title. The surface of the rod where it comes in contact with the screw is filed flat in order to keep the easel upright at all times.

The bellows, which is glued to the front sector, may be removed for compact stowing of the entire assembly in my camera case (Fig. 5). A thumbscrew holds the small end of the bellows in place on a projecting ring fitted in the lens aperture of the movable upright. By disengaging this end and sliding the masking unit off the projecting end of the metal rod. the whole contraption is ready for packing.

The camera case is constructed from a small overnight bag fitted with compartments for my camera, gadget and accessories. The whole is lined with velveteen. Ample space is provided under the camera for a meter and a small gadget or two.

And so, the gadget to do away with gadgets seems to have accumulated a few, so now my next big task is to prepare a book comprehensively setting forth in full detail all instructions necessary successfully to operate it.

Figure 5—Camera and effect box fitted in case.



Warners Christen Replicas of Ancient Vessels

THURSDAY, Feb. 15, was quite a day on the Warner lot in Burbank. That day and that lot, Stage 21 to be specific, had been selected as the time and the spot in which to christen the studio's personal ocean and the two vessels, Madre de Dios, Spanish galleon, and the Sea Hawk, Britisher. Admiral Errol Flynn was master of ceremonies.

Stage 21 has been recently built for a marine stage. It is described as the largest in the world. It's a big world at that, and it also is a big stage. You get the impression of magnitude even as you step into it. There is a pool in the centre of the stage. At each side of the pool is a vessel, perhaps thirty feet apart, as the distance between the two is recalled the day following the christening.

But that pool in the larger aspect means absolutely nothing. The vessels or rather their keels rests a dozen feet below the level of the stage floor. Water may be poured around them to the depth of twelve feet. In fact, a million gallons of water will be used for the marine scenes. That same million gallons may be quickly run off the premises by means of conduits, sewers, mains and drains.

An ingenious mechanism has been created under the hulls of the two vessels whereby the two, either one or both, may rock from side to side in quite an uncomfortable fashion possibly but surely most realistically. It goes without major denial from any source that hitherto there has been no boat, no single boat, or two boats, of the size of the two, either inside a stage or outside a stage that has been built especially for stage work.

Ruggedly Constructed

A look-see on one of the vessels shows plainly how faithfully they have been built. It is said with a little necessary reinforcement they could be made seaworthy for long ocean voyages. They seem right now to be pretty well reinforced. But here are some of the figures supplied by the Warner company, and it is here suggested in passing that the figures seem to have been compiled by a press agent who forgot that fact and wrote as a reporter who had been told to get the facts.

Thirty models were carefully constructed to scale and discarded before final plans for the two vessels were approved. These models will shortly be exhibited by libraries and museums as outstanding examples of Elizabethan ship designs. Their cost is estimated at over $10,000.

Million Gallons

The completed war ships cost over $150,000. Four months of research work was necessary before the draughting departments began their work. The ships were designed by Anton Grot, art director.

Before any construction could begin a marine stage had to be built. This massive steel and concrete building occupies over two acres of ground and was erected at a cost of $90,000.

It is the largest, most modern stage in the motion picture industry, measuring 160 by 270 feet, is 85 feet high and is especially constructed for marine scenes. The stage can be filled with water to a depth of 12 feet.

Over 1,000,000 gallons of water will be used for the sea scenes and thousands of feet of heavy mains, sewers and drains were built under and above several miles of road to the principal water source.

Working in several shifts daily 375 men were employed for eleven weeks in the construction of the British hulk and the Spanish galleon. It is estimated that the original ships after which these were modeled took over a year each in building during Queen Elizabeth's time.

The Sea Hawk is 135 feet long, weighs 127 tons fully equipped, and is over 65 feet high from deck to the mast top. The Madre de Dios is somewhat larger, measuring 165 feet, weighs 142 tons and is the same in height as the Sea Hawk.

Some idea of the enormity of the undertaking may be gathered from the fact that over 200 tons of lumber were employed—enough to erect 250 four-room cottages; two thousand tons of steel were used for the underpinnings; 20,000 feet of rope and over 3000 yards of sail canvas.

Many Extras for Weeks

The two ships will carry 24 cannon and more than 1000 eight-pound shot. Crew of 550 will man the ships, each a trained seaman. All know how to rig and set sails and comport themselves as able seamen. Sixty trained gunners will operate the cannon. Complementing them will be 120 men to help during the battle scenes.

Between 3500 and 4000 extras will work for eight weeks in the sea sequences at a salary cost of over $300,000. Their wardrobes faithful to the period have occupied the attention of sixty wardrobe mistresses and tailors for almost two months. Thirty-five make-up and hair dress experts will be on hand daily to assist the participants.

Special dressing rooms covering several acres on the Warner Brothers' "Thirty Acres" have been erected with kitchens, dining halls and other facilities required for so large an army.

Furnishings for the interiors of the cabins are all authentic and were gathered from museums, collectors and important costumers all over the country. These include old pewter and silver, furniture, lamps and crockery. These have great value since many are rare antiques. They have been insured for $250,000.

Two hundred and forty men will be literally chained to their tasks. They will portray the galley slaves in the hold of the Madre de Dios. Over 80 bolts of specially dyed blue cloth was converted into garments for several hundred extras. According to English law of the 16th century all prentices had to wear this blue garb.

Kalart's Extension Adapter Says No More Burnt Fingers

A new extension adapter with built-in ejector for use with the new Mazda Number 5 photoflash bulb, more popularly known as the "peanut" bulb or "Mighty Midget," has just been announced by the Kalart Company, manufacturers of the Micromatic Speed Flash and Lens-Coupled Range Finder.

This new ejector centers the bulb in the reflector as well as providing bayonet-type socket necessary for use with the Number 5 Mazda bulb.

Because of its small size the heat is concentrated and the photographer would normally have to wait until the bulb had cooled before removing it. However, the new ejector discharges the bulb instantly when slight pressure is applied. This permits rapid changing of bulbs and eliminates any possibility of burnt fingers.

The ejector has the standard screw type electric bulb base and may be used with all synchronizers now on the market.

Scene showing the Seahawk and the Madre de Dios, replicas of early deepsea craft erected within the confines of Warner Brothers' Stage 21. In major and minor detail, the ships are all they pretend to be—except they are within four walls. The Seahawk is 135 feet long and its companion is 165 feet in length, with a weight in tonnage of 142.

POSITIVE AND NEGATIVE FILM EXPORTS DROP 15%

Preliminary statistics of American motion picture film exports for the full twelve months of 1939 show a decrease of 27,600,000 linear feet in positive and negative sound motion picture films to the foreign markets of the world as compared with those exported during 1938, according to Nathan D. Golden, Chief of the Motion Picture Division.

This is a decrease of 14.7 percent during 1939. A total of 160,582,315 linear feet of motion picture entertainment films, with a declared value of $3,400,657 was exported during 1939 as compared with 188,237,129 linear feet valued at $4,268,818 in 1938.

Brazil replaced the United Kingdom as the largest consumer of American films in point of footage during 1939, importing 14,119,038 linear feet of positive and negative films with a value of $268,065 as compared with 13,078,753 linear feet valued at $255,953 in 1938. Argentina follows closely with 13,588,743 feet of American films with a value of $227,433 for the twelve months of 1939. Mexico, as in 1938, remained in third position.

United Kingdom's imports of positive and negative motion pictures from the United States during 1939 show more than a 50 percent decrease.

The British West Indies remains in fifth position.

During 1939 there were exported to all markets of the world 35,712,342 linear feet of 16mm. exposed positive film with a value of $887,634 and 1,911,497 linear feet of 16mm. exposed negative film valued at $92,901.

Exports of sub-standard gauge motion picture cameras of 16mm. or less during 1939 totaled 16,912 with a value of $454,155, a drop from 25,866 cameras valued at $754,822 during the year 1938.

Exports of sub-standard gauge silent motion picture projectors of 16mm. or less amounted to 19,448 with a value of $414,440 during 1939 as compared with 25,866 projectors with a value of $754,822 for the year 1938. Sound projectors of the same class are carried for the first time during 1939; the total exports of sound projectors during this twelve-month period amounted to 1,548 projectors with a value of $245,337.

Pasadena Movie Club

C. F. Carlson of the Bell and Howell Hollywood office gave a demonstration of cameras, lenses, filters and equipment to the members of the Pasadena Movie Club on the evening of February 27. Gordon Clark, recently returned from Russia and the Scandinavian countries, showed fine colored pictures exposed just before the outbreak of hostilities.

R. F. ROCKHOFF, President.

Securing Required Light on Outdoor Pictures

By Claude W. Cadarette

Founder Los Angeles 8mm. Club.

AS the sun is the main source of light for exterior photography, the problem of its control is usually complex. It is a harsh, glaring source, all-revealing and severe. Sunlight diffusion presents a different task for the cameraman, and often taxes his ingenuity to the extreme.

Due to the intensity of it, the camera must be operated at small diaphragm openings which increases the sharpness of a picture and builds up the contrast of highlights and shadows.

For soft, diffused pictures, the ability of widening the diaphragm to a large opening is most beneficial; hence the problem is more difficult as the proper exposure must be acquired at this larger opening.

There are several ways of capturing a diffused picture while filming out of doors. The simplest of these is the application of a neutral density filter on the camera lens. Neutral density glass is not a colored filter, but is similar to smoked glasses that a person would wear to relieve eyestrain.

Its purpose, like smoked glasses, is to reduce the quantity of light that enters the camera lens and does not, in any manner, act as a color correction filter.

Trying Neutral Density

If you were in the desert or on a large body of water where the sun glare is very intense, the irises of your eyes would be closed to a pinhole to reduce this glare. The constant pull of the iris muscles soon cause a tired condition.

When smoked glasses are worn, the reduction of light allows these muscles to relax, relieving this strain. The irises open larger to compensate for the loss of light occasioned by the glasses.

Likewise, by placing a neutral density filter over a camera lens, we may open the lens diaphragm to a larger aperture to compensate for the loss and maintain a correct exposure. This will also decrease the sharpness of the picture and the extreme contrast between highlights and shadows is lessened.

Neutral density filters are made in various absorption powers, the heavier filters absorbing 50 per cent of the light, or more. The lesser densities of 25 per cent are more practical as they can be used in conjunction with color filters.

Diffusion Filters

The use of diffusion filters on camera lenses will also produce soft effects on the screen. Many times a cameraman may want the background heavily diffused, and the foreground undiffused or sharper. This effect, however, cannot be achieved with diffusion disks.

The only control you have by using these disks is the various overall diffusions obtained according to the degree of light dispersement in the different disks. They are adaptable for scenics or shots wherein the diffusion can be spread over the entire screen.

When fine mesh gauze is stretched in a titler frame, it is possible to leave the background photograph very fuzzy, yet leave the action in the foreground remain sharp. Mount the camera on the titler and remove the auxiliary lens. By aligning your actors in the frame, burn out that section of gauze which would diffuse them.

Using a lighted cigarette, you can burn this section without danger of igniting the whole piece of gauze. Sharp cloud effects and soft foregrounds can be filmed by placing the gauze along the lower half of the frame in the titler.

Then, again, in some romantic sequence of your story, you may want the actors to be softly diffused yet retain a sharpness of the background for the effect of depth. This necessitates the building of a large wooden or bamboo frame over which a piece of cheesecloth is stretched.

Mount the frame on some support so that the sunlight falling on the actors is diffused through the cloth. The background will remain sharp while the actors are in a soft light which adds warmth to their part in the scene.

Duplicate Sun in Retakes

The filming of actors in outdoor scenes should be confined to hours of lower sunlight. High noon or vertical light casts objectional shadows in the eyes and accentuates the cheek bones of the face. Lower angle light makes longer shadows that are more attractive, and is more advantageous for back lighting.

In making any retakes, do it at the same time of day so that the lighting is uniform in the sequence.

When backlighting the actors, use silver or gold faced reflectors and expose for the shadow side of the scene. The exposure should be kept at approximately f.3.5 or f.5.6 for the soft effect. The distance of the reflectors from the actors will determine the exposure. The meter readings must be carefully taken so that no sunlight is included to affect the meter.

In taking a reading against the sun, it is of vital importance to shade the meter with the hand and slightly tilting the meter down to eliminate light from the sky. If the reading of the background registers an opening of f.5.6, set your reflectors so that the face of the actors also register a f.5.6 reading.

This will give you a balance of background and foreground light. If no reflectors are used in a scene of this type, you can silhouette the actors against the background. For extreme silhouettes against a setting sun, place a 23A red filter on the lens and use an f.11 stop.

Telephoto for Closeups

A painter has his brushes and colors to produce his art. Your equipment of filters, reflectors, camera, etc., must be handled as judiciously as the brushes and oils to get the most desirable scene on your screen. You are the painter. The screen results depend entirely on the man behind the camera and not on the equipment.

The use of a telephoto lens for closeups is a novel means of fuzzing out the background without the use of gauze or disks. It must be remembered that the short focal length lenses of amateur motion picture cameras has an enormous depth of focus.

Usually this deep range is too great to overcome without the use of disks or gauze. The longer focal length lenses for telephotography are more critical in focus and the focal depth is considerably shorter. Thus by using the longer focal length lenses for closeups, the back-

(Continued on Page 141)

BOOKS

Graphic Graflex Photography. Morgan and Lester, Publishers, 100 East Forty-second street, New York. $4. Over 400 pp., 7½ by 10 inches. Copiously illustrated.

HERE is a book which covers all the exciting uses for the Speed Graphic and Graflex cameras. Photographers and contributors give their personal experiences, including actual facts and working descriptions.

For the first time in modern photographic literature a special chapter has been included giving full details about using the view cameras, which are coming into popular use. This chapter is presented by Berenice Abbott, whose many view camera pictures have appeared in various publications and in her new book, "Changing New York."

Illustrative and Advertising Photography is fully described by John F. O'Reilly, who takes you behind the scenes and shows you how he makes those arresting pictures which appear in all the National publications.

Negative Exposure and Development is presented from a new angle by H. P. Rockwell, Jr.

Another chapter gives a clear understanding of lenses and information about their selection, written by R. Kingslake.

Photographic Filters and a complete story on Kodachrome Photography are presented by John W. McFarlane.

Ansel Adams gives his practical step-by-step procedure in making photographic prints.

Illumination and Its Control is presented in a novel and informative way by D. J. Mohler and R. E. Worstell.

News and Press Photography has a direct interest for all who are interested in pictures. This chapter is written by Frank Scherschel and Stanley E. Kalish of the Minneapolis Journal.

Millions of dollars are spent every year on publicity photographs. No one has ever written a complete story on this important phase of photography. There is a complete chapter by Willard D. Morgan on this subject, fully illustrated.

There are many other chapters filled with current, practical information for every one interested in photography. Henry M. Lester presents a comprehensive review of all Graphic and Graflex Cameras and their accessories, with detailed explanation of their application and usefulness. He also provides a number of interesting solutions of modern Darkroom Problems. At last we present a book for all users of the larger cameras.

Infra-Red Photography with Kodak Materials. Eastman Kodak Company, Rochester, N. Y. 36 pp. 5¾ by 8½ inches. Illustrated. 25 cents.

This is a new title in the series of photographic data books issued by Eastman. It is paper-bound and uniform in format with the other Kodak data books.

Both theoretical and practical aspects of infra-red work are discussed in the new booklet, which is complete with specification tables for Kodak infra-red film, Eastman infra-red sheet film, Eastman infra-red sensitive plates, and Eastman infra-red process plates.

The nature of infra-red radiation, and its place in the spectrum, are treated. Applications in pictorial photography, long-range work requiring haze penetration, photography in darkness, criminology, discovering forgeries and restoring obliterated passages in censored books, copying and other fields are described.

Data are given on lenses and filters suitable for infra-red photography, hypersensitizing techniques, exposure for landscape pictures and shots by artificial light. The specification tables include characteristic curves and full processing data and a lengthy bibliography is supplied.

Kalart Distributes $250

Winners in the third annual Kalart Speed Flash competition have just been announced. Cash prizes to the amount of $250 were awarded to 25 winners.

More than 2000 prints were received, a 130 percent increase over last year's contest, showing the interest in Speed Flash photography.

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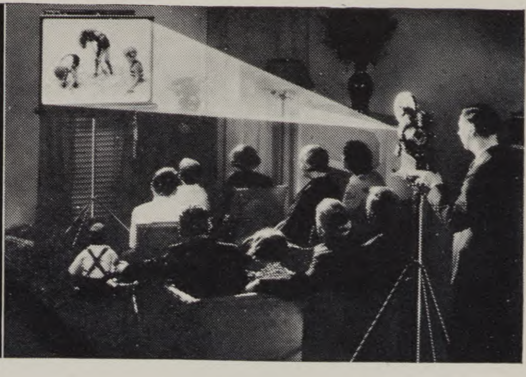

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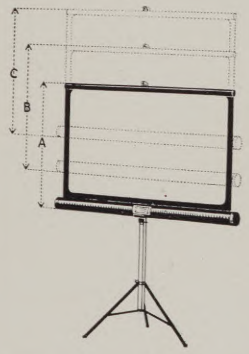

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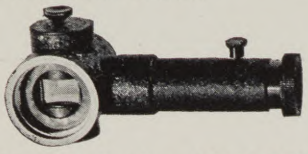

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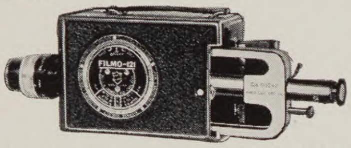

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THE FEBRUARY FILMS

(Continued from Page 107)

over the scene, and sails out to keep a date with her latest.

When Winsome Willie comes strolling from the bathroom, attired in one of his bride's gowns, his new sheriff's star blazing from the breast, and takes due note of the romantic atmosphere permeating the now dimly lighted room, he slides to the bed and climbs in.

As Willie sinks into the feathered surroundings there comes a plaintive "Ma-a-a-aa-h!"

Right at that point the house breaks—loud and long. It is several minutes before things get straightened out between Willie and the goat.

But the foregoing, of course, is an extreme situation, as it must be. It is merely quoted to show what two longtime troupers will cook up to make fun for the million.

It was Joseph Valentine, A.S.C., to whom fell the pleasant task of supervising the photography on the picture. He made the most of his opportunities in photographing the 120-pound slimmed Mae Westian figure, adding immeasurably to the physical charm of the siren.

For those who dearly love a laugh there should be no thought of missing a peek at Mae and Willie in their funmaking. And there's a host of good actors to support them.

●

Splendid entertainment is provided by Twentieth Century-Fox in "Little Old New York." While it is stern drama at times, there is a deal of comedy running through it. It is New York of an earlier period, of 1807, with the atmosphere of the waterfront. There are local bigwigs of the day—for instance, Robert Livingston, Nicholas Roosevelt, John Jacob Astor, Washington Irving—headed by Robert Fulton, builder of the Clermont, the steamboat he constructed that was able to make four miles an hour up the Hudson.

Fulton was well portrayed by Richard Greene, while Alice Faye and Fred MacMurray were the other leads. Brenda Joyce, Andy Devine and Henry Stephenson were the remaining principals. There was a large supporting cast.

The director of photography was Leon Shamroy, A.S.C., and Fred Sersen was in charge of special effects. As the atmosphere was of the waterfront, so it also was of the shipyard—of its literally forest of masts.

There were stirring scenes of shipbuilding, the thrill of a foggy river at night as the hero tries to baffle the harbor patrol; scenes of fist against fist and club against club, of the premature launching of a half-completed boat in order to save the shipyard from destruction by fire. There were charming views of the interiors of New York homes of the period.

It is stirring melodrama.

●

Barring one more or less famous recent exception, tales of North and South are somewhat infrequent these later days. In contrast with that they were one of the more notable themes of screen dramas in the early days of the motion picture, twenty-five or even thirty years ago. Of course one reason for that is that a quarter of a century ago the Civil War was more actively in the memory of millions who now have passed on.

"The Man from Dakota" is an MGM drama of two Northerners, a lieutenant and a top sergeant, held in a Southern prison camp. Piling evidence of a coming important conflict and the existence of a detailed plan of battle from the Southern side determine the lieutenant to make a try for escape. The story turns on that.

Wallace Beery is the top sergeant, John Howard the lieutenant, and Dolores Del Rio a Russian girl thrown into the drama by circumstances unexpected as they are somewhat thrilling. It is not a great picture, as few pictures really are, but it is a satisfying production, to all at least other than those who frankly see too many screen performances.

Ray June, A.S.C., is the director of photography who had few opportunities for brilliant lighting. The picture was sombre, a majority of the scenes being of the woods, swamps and streams, usually heavily shaded. The few occa-

(Continued on Page 138)

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The February Films

(Continued from Page 136)

sions of showing wide, sunlit fields and vistas appeared to all the greater advantage. But many of the heavily shaded shots, with the sun fighting its way through, were of a striking character.

•

LOVERS of the dance will get their fill in MGM's "Broadway Melody of 1940." Instead of the usual two principals now there are three—Fred Astaire, Eleanor Powell and George Murphy. There is a plot, of course, but its purpose is to serve as a background for the dance. And justification for that background is abundant. It provides rare entertainment. The dancing is superb.

The production is sumptuously staged—which means that it must be sumptuously photographed. As evidence that it was the company lists two of its top A.S.C. men as directors of photography—Oliver T. Marsh and Joseph Ruttenberg. Just for an example of the problems faced by the photographers is the size of the set on which was performed the "Begin the Beguine" dance.

It was the largest ever created for a dance—225 feet long, 137 feet deep and 80 feet high. As the dancers rambled and rolled over the great area the cameras had to be alongside the greater part of the time. Some of the time they remained stationary in order the audience might grasp a conception of the size.

Then there was a mirror on which Astaire and Powell danced around and over which may have presented some photographic problems—pure white garb against a deeply black background. The mirror was sixty feet square—3600 square feet, but appearing several times larger. The mirror was created in sections. In the finished print there is no evidence visible the dancers smashed thirty of these sections.

In the Pierrot and Pierrette number put on by Astaire and Powell fifty-three different light set-ups were required for the opening few minutes.

•

ANOTHER fine picture was added to the several which had been released during the past few days when on February 1 Warner Brothers previewed "Dr. Ehrlich's Magic Bullet." Edward G. Robinson is the player who took over one of the most delicate portrayals ever assigned a screen actor. But with such tact had the screen play writers performed their task that he went through the part without a thought of giving offense. The writers were John Huston, Heinz Herald and Norman Burnside. It was a splendid script—and a splendid directing and acting performance.

Ruth Gordon, who made her picture debut as Mary Todd Lincoln in the recent "Abe Lincoln of Illinois," made her second appearance on the screen as Mrs. Ehrlich. It is a deeply sympathetic part, the opposite of her Lincoln portrayal, and one that even more strongly will make for her popularity. Prominent in the cast were Otto Kruger, Donald Crisp, Maria Ouspenskaya and Montagu Love.

The settings, meaning the properties, perhaps were the most pretentious recalled. The company went to great time, research and expense to visualize on the screen the experimental laboratories and manufacturing establishments of Dr. Ehrlich, perhaps at the time the greatest in the world.

Jimmy Howe, A.S.C., was the director of photography. It was two great biographical stories in a row, being a follower of "Abe Lincoln in Illinois." Seldom does it fall to a cinematographer to handle consecutively two such unusual, two such great, films.

•

In one of the greatest of outdoor stories, "Northwest Passage," M-G-M Studio has done itself proud in many departments. In the first place, let it be said that unthinking persons may declare the production to be a natural for men and not so much for women. Undoubtedly that will prove to be only part of the truth.

Conceding the story ignores the romantic side, that it magnifies the adventurous, the heroic, the hazardous, and brings out the sufferings and the sacrifices de-

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manded of men who lay the groundwork of a later peaceful life, who will assume women are not concerned in these major factors of frontier soldiering. "Northwest Passage" may be a man's story all right, but also it will carry plenty of thrills for women. The women will trail along with the men to see the picture.

Spencer Tracy is the head and front of the picture. He has the part of Major Rogers, the chief of Rogers' Rangers, the small but most effective force of Indian fighters operating out of Portsmouth, N. H., in 1759 and later. Its allies were the British Redcoats and its enemies the French and Indians.

There are events in the picture that stand out, things of such size as will live in the memory. There is the crossing of the Idaho river rapids by the Rangers for one of these. Tracy, immersed in the river and with one arm locked around the trunk of a tree, served as the anchor as one by one clasped hands and swung out across the rapids. When contact with the opposite shore was established then began the crossing of the remaining men with the added impedimenta of the men on the chain. It was a battle. A crew of lifesavers was strung along to pick up any who slipped through the chain.

There was the attack on the Indian village in the early morning hours. It was a pretentious encampment, housing several hundred—one of the biggest in film history.

Sidney Wagner, A.S.C., and William V. Skall, A.S.C., were the directors of photography, which was in Technicolor throughout. And throughout it was of the best. Giving just an idea of the labor involved in this department, there were 1268 different set-ups for the cameras on nine major sets. Of the 298,000 feet of Technicolor negative that had been exposed 262,000 were printed. There were in addition 192,345 feet of sound track printed.

•

In M-G-M's "The Ghost Comes Home" Frank Morgan is seen in another "new departure" picture, following up his role in "The Shop Around the Corner." Undoubtedly he attracted more attention in the latter picture than it is likely he will in the present one. Of course in it he was more a part of the show rather than as in the present one a dominating factor. In the preceding picture he was attended by all the elevating influences of a strictly No. 1 performance, with two veteran stars and a veteran director.

In the present film Morgan, the star, is accompanied by a young woman playing her first romantic lead. Opposite Ann Rutherford is John Shelton, in his first leading screen part. Recently signed by M-G-M, Shelton makes a splendid impression. He will go far. There are good players in the other roles—as for instance Billie Burke, Reginald Owen, Donald Meek, Nat Pendleton, Frank Albertson, Harold Huber and Hobart Cavanaugh.

The story is simple, with no spectacular or dramatic heights; but to an average audience it will interest and amuse, perhaps highly and perhaps mildly, depending to a degree upon the frequency with which the individual attends the pictures.

Leonard Smith, A.S.C., is the director of photography. He acquits himself with credit in a spot that had its difficulties.

•

Paramount's "Seventeen" is a picture upon which there may be wide differences of opinion as to its appeal. After all, perhaps it is a young person's story, although there is reason to be skeptical on this point, too. The woman who for lo these many has sat down to breakfast opposite this writer—and who, by the way, is also something more than seventeen herself, was quite charmed with the story. She frankly was interested in it—thought it a most appealing portrayal of the difficulties encountered by a boy in love, of the magnitude in his imagination of the many factors opposing him, factors which his parents among others were inclined to minimize.

Jackie Cooper plays Willie Baxter—plays the part for all he is worth, with force and conviction aplenty. Betty

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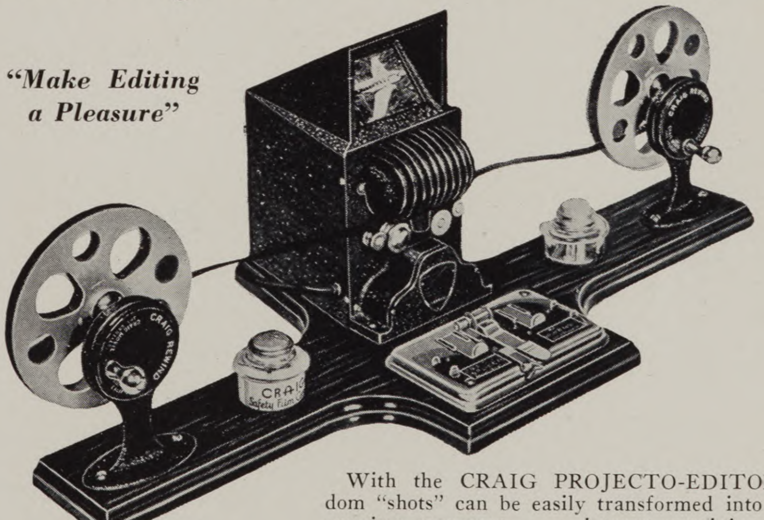

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Field is Lola Pratt, the girl from Chicago who comes to visit the small town where the story is staged. She causes herself to be properly disliked. As one of a group of young folks remarked as she was filing out of the theatre "We all just hated her."

Contributing to the entertainment side as opposed to those who fostered the antagonistic, the unpleasant, side of the story were Otto Kruger as father Baxter and Ann Shoemaker as mother Baxter. Also there was the little girl, Jane Baxter (Norma Nelson), who delegated herself to put her big brother under espionage and to keep her mother informed. Along with her parents she did a splendid job.

There was another character who did valiant service to contribute a laugh or two to a tale that at times seemed overdrawn. That was Thomas Ross, who struggled with a typewriter while the spooners spooned in an adjoining room or under his window.

Victor Milner, A.S.C., was the director of photography; he gave the picture of his abundance, but it was not "The Great Victor Herbert," abounding in opportunities to display his many wares.

New Kodaguides Offer Aid To Advanced Photographers

Two new Kodaguides, of definite practical value for the professional and commercial photographer and the advanced amateur, are announced from Rochester by the Eastman Kodak Company.

One, the Eastman Film Kodaguide, provides extensive and valuable data on all Eastman Sheet Films, miniature films, and roll and pack films in general use. Data include identification of film type, color sensitivity, Kodak speeds, Weston and General Electric meter settings both daylight and tungsten, a notching code chart, a chart showing the monochrome rendering of colors by each film type under tungsten light, and daylight and tungsten factors for eight commonly used filters (K-1, K-2, X-1, G, A, F, B and C-5) when used with each film type.

In addition, spectrograms of all film types and spectral transmissions of all filters are charted in full color—and all this material is presented on a single handy, Kodapak-laminated, pocket-size card 3 by 4½ inches!

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The other guide, known as the Effective Lens Aperture Kodaguide, will be of material use to photographers in all branches of copying and small-object photography, when lenses are used at other-than-normal extensions. Covering all lenses from 25mm to 30-inches focal length, and lens-to-film distances from 1 to 64 inches, this Kodaguide will be of value both in still photography and in motion-picture work where extension tubes are employed.

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The new Kodaguides, each retailing at 10 cents, supplement a list of eleven now in regular use by amateur or professional photographers.

Self-Reflecting Photoflood Lamp Is Designed by GE

And now comes a self-reflecting photoflood lamp with a black neck. This new refinement applied to the 500-watt Mazda photoflood lamp R2, a revolutionary light source introduced last year, is announced by General Electric's lamp department at Nela Park, Cleveland.

The black opaque coating on the outside and extending for two inches from the lamp's base to a point beyond the lamp's interior aluminum reflecting surface is designed to prevent stray light from escaping.

The new black-neck feature was developed in response to unforeseen uses to which professional and amateur photographers have been putting the R2 lamp. One and sometimes two GE R2 photofloods are often used—as shown in this photo of a studio set-up—with the flood source, or sources, very near and just ahead of the camera.

In cases of this kind, the opaque coating prevents stray light from spilling backward through the lamp's neck and into the camera lens.

Showing self-reflecting photoflood lamp with black neck issued by G.E.

Light on Outdoor Pictures

(Continued from Page 134)

ground will fall out of focus faster than when you use a standard lens.

Also, its field is smaller, which allows you to place reflectors or diffusing frames closer to the actors. Telephoto lenses should be used as much as possible for portrait use, unless the actions require more area of field for movements without panoraming the camera.

Many amateurs replace reflectors, when they can, by using photoflood lights to lift the shadows on faces. Using photofloods outdoors is less troublesome than reflectors and get the same result. Although you use artificial light, it is not advisable to change the meter setting for artificial light, as sunlight is to predominate.

Use Plenty of Time

Good lighting cannot be set in a hurry, and keep in mind that Time is the cheapest commodity when filming motion pictues. Use plenty of it, plan your lighting, angles and camera technique, constantly checking your progress in the finder until your scene is as pleasing as you wished it. Strive for a result as professional as your equipment will permit.

The still photographer can control his highlights and shadows to a great extent while making his enlargements in the darkroom. Your screen results must be produced in your camera.

This should train you to be more critical and your technique must be more exacting. If you film motion pictures with excellent results, you can be reasonably classed as a better photographer than a still photographer.

Good judgment and common sense play as important a part in good lighting setups as any basic lighting rule that may exist.

Avoid the use of flat lighting. A slight change of camera position will give you a cross lighting effect adding life to the scene. This is true when shooting both panchromatic and color movies.

The only pictures that receive outstanding merit are those which have taken time and study to produce. Most amateurs are pressed for time since their filming activities are confined to weekends or evenings. They have a tendency to speed up their shooting and neglect the details that brand their picture as amateurish.

Your reaction to a Hollywood "quickie" is identical to the reaction that your own audience receives when it views your "quickie." Poorly lighted films soon find their way to the bottom of presentable films.

After spending money for film, time to film the picture and energy in planning each shot, can you afford to produce a scenario that is insufficient in entertainment quality?

Chicago Cinema Club

The Chicago Cinema Club issues News Flashes, which under date of February 2 is a honey, whether you are thinking in terms of style or content. Peter S. Besek is the editor. His associates are J. R. Brongel, Charles Edwards, Francis Hessler and A. W. Saunders. News Flashes is in four pages and measures 5½ by 8½, or half letter size.

Two of the pages are typewritten full width and two are of half width, or two columns to a page. On three of the four pages the lines are "justified" in printer's parlance, that meaning to the uninitiated each line comes out full. The end of the lines do not fall where the words normally would bring them, but extra spaces are supplied as necessary. The job, and it is a tough one, is well done.

On page 1 is some advice about the value of snow scenes in your library. "We had a nice snow storm here only a few weeks ago, albeit the zero wave which accompanied the snowflakes was no musical symphony to any except the hardiest northerners or the famed 'Polar Bears' of this city," declares the editor. "But we did get some good pictures of places and people, mostly the latter, that should look pretty good to us along about July or August.

"But there'll be another snowfall at least before spring, one of those soft, clingy snowfalls, when you plough through it as though through down. Then, if ever, is everything made to order for you for a real perfect setting to almost any picture you may have or want to make."

Another suggestion or several of them under the heading of Cinechatter are:

Here's an idea for editing that Ye Editor has had in mind to do for months but has never got around to it. If you have a bunch of unrelated parade shots lying among your useless footage, why not put it all together, give it a good title, something like "Everybody Loves a Parade" and score it to music of the same nature.

B & H Film Laboratory OK's Kodachrome Film Cleaner

Bell & Howell calls attention to the fact that Filmoleen cleaning fluid is recommended for Kodachrome film as well as for black and white. B & H wishes to point out that while Filmoleen, along with other cleaners, will remove the slight surplus of dye from the surface of the color film, giving the cleaning fabric a yellowish tinge, the colors of the film are in no way affected. It is stated that after the first tinge of color is removed, subsequent cleanings with Filmoleen have no further effect in this respect.

It is stated further that in thoroughly testing the cleaner in its engineering laboratory, a Filmoleen-cleaned loop of Kodachrome film was projected nearly 500 times, with no effect whatsoever on the color.

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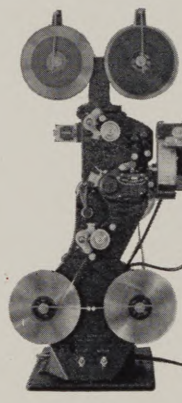

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NON-GLARE COATING SPEEDS LENSES

(Continued from Page 109)

need not be confined solely to motion picture camera lenses. It will be equally beneficial when applied to the lenses of still cameras, optical printers, projection lenses and the like, while the advantages to be gained from applying the treatment to the optical systems used in recording and reproducing sound, where speed and extreme resolving power are so necessary, should be equally revolutionary.

The possibilities inherent in the combination of treated camera and recorder lenses with the recently developed techniques of fine grain recording and printing seem tremendous.

In addition, there are many other glass surfaces which can benefit by non-glare treatment. In many types of trick photography, mirrors are employed. Conventionally, front-surface mirrors are used, to eliminate the double image given by the inevitable reflection from the glass surface of an ordinary rear surface mirror.

Such mirrors are expensive, and scratch and tarnish very easily. But if the glass used is given this anti-reflection treatment, the cheaper and more durable back surface-mirrors may be used with perfect satisfaction.

Used On Production

Paramount's experiments with treated lenses have been under way for several months. The studio's optical engineers had been closely watching the progress of Dr. Strong's work, and as soon as it was learned that he felt the process had reached the stage of commercial practicability, the Paramount engineers launched their own programme of tests.

Two identical lenses were selected from the studio's stock: both were standard three-inch Astro "Pan-Tachars," which the most exhaustive optical and photographic tests had proved to be identical in all optical characteristics. One lens was treated; the other was not.

Tests on the optical bench and in actual photographic use immediately revealed the advantages of the non-reflection treatment. In consequence, a complete set of objectives ranging from a 28mm. to a three-inch were treated, and after many tests were used on actual production.

At this writing, several sequences of the production "The Ghost Breaker" have been filmed entirely with the treated lenses. So successful have been the results that, as has been said, it seems probable that all of the studio's lenses will be given the non-reflection treatment.

In closing, the writer has been asked to state that as Dr. Strong is primarily a research scientist and engaged in further exacting research activities, any inquiries as to the commercial application of this process should not be addressed to him, but to the Vard Mechanical Laboratory of Pasadena, which is undertaking commercial development of the system.

A pilot installation, capable of treating objects up to about four or five inches in diameter, is now in operation, and equipment of larger capacity is being installed. The process as a whole seems capable of unlimited application in photography, and represents without doubt one of the most sensational advances in many years.

B & H Film Book 1940 Edition 30 Percent Gain Over 1938

Literally a "blue book" of film information, the 1940 edition of the Filmosound Library Catalog is now available, opportunely coming just at the height of the film-booking season. Bell & Howell announces that the new 92 page film book is 28 pages larger than last year's catalog, that it lists 400 more films, and that it is more helpful than ever as a guide to the selection and evaluation of film programs.

Geared to meet the most diversified demands of educator, industrialist, home, church and community, the library offers carefully selected films on a vast variety of subjects, and the new edition of the catalog covers them all.

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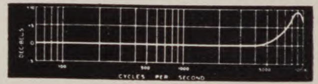

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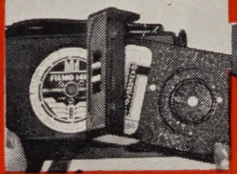

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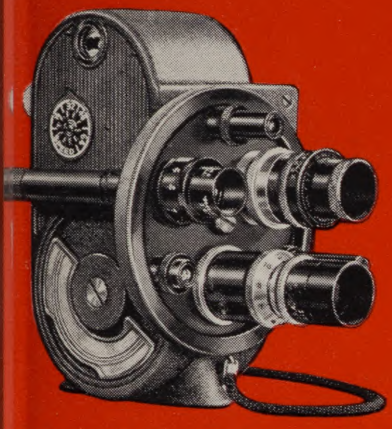

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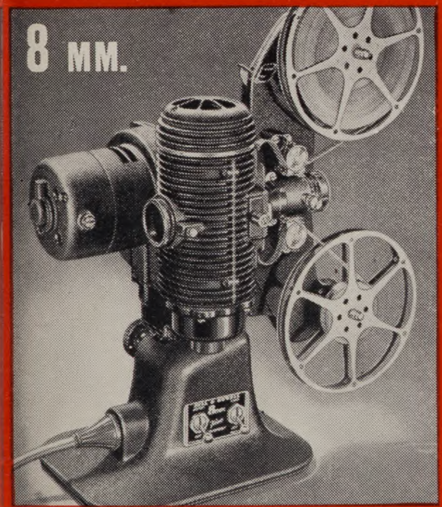

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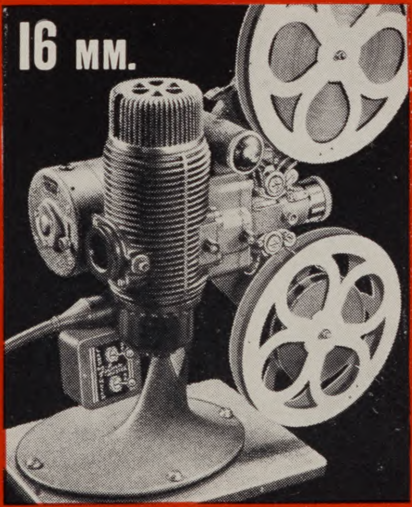

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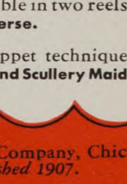

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